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Agriculture



NRCS

Natural  
Resources  
Conservation  
Service

In cooperation with the  
Research Division of the  
College of Agricultural and  
Life Sciences, University of  
Wisconsin

# Soil Survey of Washburn County, Wisconsin

## Subset of Major Land Resource Areas 90 and 91



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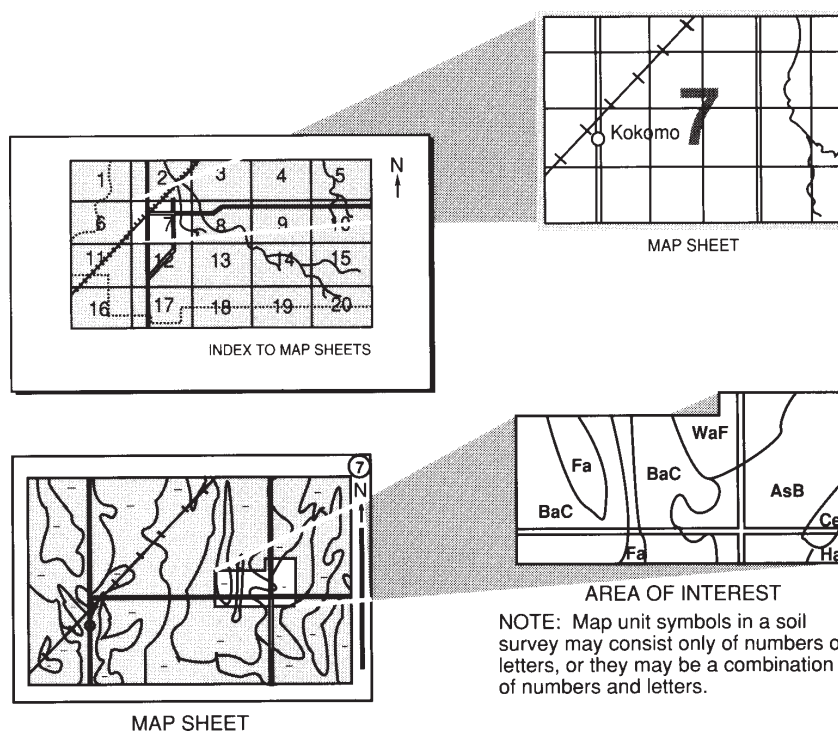
# How To Use This Soil Survey

This publication consists of a manuscript and a set of soil maps. The information provided can be useful in planning the use and management of small areas.

To find information about your area of interest, locate that area on the **Index to Map Sheets**. Note the number of the map sheet and turn to that sheet.

Locate your area of interest on the map sheet. Note the map unit symbols that are in that area. Turn to the **Contents**, which lists the map units by symbol and name and shows the page where each map unit is described. The map symbols and names also appear as bookmarks, which link directly to the appropriate page in the publication.

The **Contents** shows which table has data on a specific land use for each detailed soil map unit. Also see the **Contents** for sections of this publication that may address your specific needs.



## National Cooperative Soil Survey

This soil survey is a publication of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (formerly the Soil Conservation Service) has leadership for the Federal part of the National Cooperative Soil Survey. This survey was made cooperatively by the Natural Resources Conservation Service and the Research Division of the College of Agricultural and Life Sciences, University of Wisconsin. The survey is part of the technical assistance furnished to the Washburn County Land and Water Conservation District. The State of Wisconsin provided financial assistance, and the Wisconsin Department of Natural Resources provided technical assistance.

Major fieldwork for this soil survey was completed in 2001. Soil names and descriptions were approved in 2002. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 2002. Digitizing of this soil survey was completed under the direction of the Madison, Wisconsin, digitizing unit in 2002. The most current official data are available on the Internet.

Soil maps in this survey may be copied without permission. Enlargement of these maps, however, could cause misunderstanding of the detail of mapping. If enlarged, maps do not show the small areas of contrasting soils that could have been shown at a larger scale.

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## Caption for Cover Photo

The Spooner Hills (background) represent a common landform in central Washburn County. The surrounding valley floors are flat, sandy remnants of Glacial Lake Grantsburg or outwash plains.

*Additional information about the Nation's natural resources is available online from the Natural Resources Conservation Service at <http://www.nrcs.usda.gov>.*

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# Foreword

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Soil surveys contain information that affects land use planning in survey areas. They include predictions of soil behavior for selected land uses. The surveys highlight soil limitations, improvements needed to overcome the limitations, and the impact of selected land uses on the environment.

Soil surveys are designed for many different users. Farmers, foresters, and agronomists can use the surveys to evaluate the potential of the soil and the management needed for maximum food and fiber production. Planners, community officials, engineers, developers, builders, and home buyers can use the surveys to plan land use, select sites for construction, and identify special practices needed to ensure proper performance. Conservationists, teachers, students, and specialists in recreation, wildlife management, waste disposal, and pollution control can use the surveys to help them understand, protect, and enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. The information in this report is intended to identify soil properties that are used in making various land use or land treatment decisions. Statements made in this report are intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

These and many other soil properties that affect land use are described in this soil survey. The location of each soil is shown on the detailed soil maps. Each soil in the survey area is described, and information on specific uses is given. Help in using this publication and additional information are available at the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

Patricia S. Leavenworth  
State Conservationist  
Natural Resources Conservation Service



# Soil Survey of Washburn County, Wisconsin, Subset of Major Land Resource Areas 90 and 91

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By Fred J. Simeth, Natural Resources Conservation Service

Fieldwork and data development by Keith A. Anderson, Scot A. Haley, David J. Hvizdak, Mark A. Krupinski, Kenneth W. Lubich, James Martzke, Phillip D. Meyer, Fred J. Simeth, Jeff C. Talsky, Chanc L. Vogel, and Robert D. Weihrouch, Natural Resources Conservation Service

United States Department of Agriculture, Natural Resources Conservation Service, in cooperation with the Research Division of the College of Agricultural and Life Sciences, University of Wisconsin

## How This Survey Was Made

This survey was made to provide information about the soils and miscellaneous areas in the survey area, which is in Major Land Resource Areas 90 and 91. The majority of MLRA 90 occurs in Wisconsin, and the majority of MLRA 91 occurs in Minnesota. Major land resource areas (MLRAs) are geographically associated land resource units that share a common land use, elevation, topography, climate, water, soils, and vegetation (USDA, 1981). Washburn County, which is in northwestern Wisconsin (fig. 1), is a subset of MLRA 90, Central Wisconsin and Minnesota Thin Loess and Till, and MLRA 91, Wisconsin and Minnesota Sandy Outwash. Map unit design and the soil descriptions are based on documentation of the occurrence of each soil throughout the MLRAs.

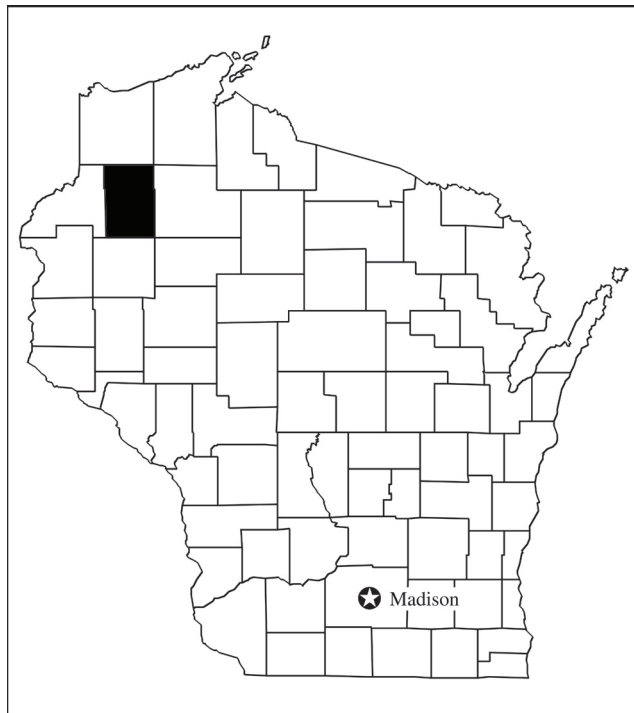
The information in this survey includes a brief description of the soils and miscellaneous areas and interpretive tables showing soil properties and the subsequent effects on suitability, limitations, and management for specified uses.

During the fieldwork for this survey, soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They dug many holes to study the soil profile, which is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

The soils and miscellaneous areas in the survey area are in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landscape or segment of the landscape. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landscape, soil scientists develop a concept, or model, of how the soils were formed. Thus, during mapping, this model enables the soil scientists to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Individual soils on the landscape commonly merge into one another as their characteristics gradually change. To construct an accurate map, however, soil





**Figure 1.—Location of Washburn County in Wisconsin.**

scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they observed. The maximum depth of observation was about 80 inches (6.7 feet). Soil scientists noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, soil reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Interpretations are modified as necessary to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For

example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a zone in which the soil moisture status is wet within certain depths in most years, but they cannot predict that this zone will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil scientists were denied access to a few tracts in the county. These areas were mapped using knowledge of soil patterns in the surrounding area and by aerial photo interpretation. The identification of soil properties and the delineations of soil boundaries are less accurate on these tracts than in areas where soil scientists had access to the land and could examine the soils. On the detailed soil maps, these tracts are labeled "Reduced Reliability, Access Denied."



# Formation and Classification of the Soils

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Soil is produced by the action of soil-forming processes on materials deposited or accumulated by geologic forces. The characteristics and properties of soil in a given area are determined by (1) the physical and mineralogical composition of the parent material; (2) the climate under which the soil material has accumulated and existed since accumulation; (3) the living organisms on and in the soil; (4) the relief, or lay of the land; and (5) the length of time the forces of soil formation have acted on the soil material (Jenny, 1941). The relative effect of each of these factors is reflected in the soil profile.

The interaction of these factors during the transformation of the parent material into soil generates complex physical, chemical, and biological processes that cause minerals to become weathered and organic matter to accumulate. Material in suspension or in solution moves downward through the soil to form definite layers, or horizons, in the soil. These layers—surface layer, subsurface layer, subsoil, and substratum—are defined in the Glossary.

All of the major factors of soil formation are interrelated. When one factor changes, the other four factors are affected. The following paragraphs describe the factors of soil formation as they relate to the soils in the survey area.

## Parent Material

Parent material largely determines the physical and chemical properties of the soil, such as the capacity or ability of the soil to store water and nutrients for plants and the rate at which water can pass through the soil.

The soils in Washburn County formed in a wide variety of parent materials, including till, outwash, glaciolacustrine deposits, and alluvial deposits.

Till is unsorted, unstratified drift consisting mainly of clay, silt, and sand. It may contain gravel, cobbles, stones, or boulders. The till in the southern part of the county is dominantly sandy loam. Freeon and Magnor soils are examples of soils that formed in silty deposits and in the underlying loamy till. The loamy till is dense at a depth of 40 to 60 inches. This dense layer restricts the movement of water through the soil.

Fremstadt and Spoonerhill soils are examples of till soils that are dominantly sandy throughout. They have a thin loamy upper layer but have friable sandy till in the subsoil and substratum. These soils are in the central part of the county on moraines surrounded by sandy outwash soils.

Some of the soils in the northeastern part of the county that formed in till are underlain by basalt bedrock. Magroc and Metonga soils are examples of soils that formed in silty deposits underlain by till over the bedrock.

Outwash is sand, sand and gravel, or stratified sand and gravel deposited by water flowing from a melting glacier. Rosholt, Scott Lake, and Oesterle soils formed mostly in loamy deposits over sandy and gravelly outwash. Anigon, Antigo, Brill, Sconsin, Billyboy, and Poskin soils formed mostly in silty deposits over sandy and gravelly outwash.

Graycalm, Grettum, Mahtomedi, and Menahga soils are examples of outwash soils that are sandy or gravelly throughout. These soils are in the central and northwestern parts of the county.

Glaciolacustrine deposits are materials ranging from fine clay to sand derived from glaciers and deposited in glacial lakes, mainly by glacial meltwater. Many deposits are interbedded or laminated. In Washburn County, ice-walled lake plains formed as surrounding stagnant ice melted. These dish-shaped plateau formations are easy to recognize on topographic maps (Johnson, 2000). Barronett, Comstock, and Crystal Lake soils are examples of soils that formed in areas where these deposits are dominantly loamy. Cublake, Flink, and Sissabagama soils are examples of soils that formed in areas where loamy glaciolacustrine deposits are covered by deep deposits of sandy outwash.

Other glaciolacustrine deposits in Washburn County were laid down in areas once covered by Glacial Lake Grantsburg. Glacial Lake Grantsburg formed as the Grantsburg Sublobe of the Des Moines glacial advance dammed the southwest-flowing St. Croix River in the vicinity of Grantsburg in Burnett County. It is estimated that Glacial Lake Grantsburg lasted for about 80 to 100 years (Johnson, 2000). Dody, Karlsborg, and Perida soils are examples of soils that formed in areas where a thin layer of clayey Glacial Lake Grantsburg glaciolacustrine deposits were covered by moderately deep or deep sandy outwash or glaciolacustrine deposits. These soils occur in small pockets in the east-central part of the county.

Some of the soils in the county, such as Totagatic and Winterfield soils, formed in sandy postglacial alluvial deposits that were laid down as rivers overflowed and deposited fresh sediments on the flood plains. Fordum soils are examples of soils that formed in loamy alluvial deposits.

## **Climate**

Climate influences soil formation by providing the moisture and temperatures necessary for the weathering of parent material. It also alters the parent material through the mechanical action of freezing and thawing.

Water dissolves and transfers soluble materials and nutrients to the lower parts of the soil. Reaction, or pH, is largely influenced by this process. Temperature affects the rate at which chemical reactions and biological processes proceed. These reactions and processes are slower at a lower temperature than at a higher temperature. Moisture and temperature also affect the kinds of plants and animals that grow on and in the soil. The accumulation and decomposition of organic material also are influenced by moisture and temperature.

Wind can affect the development of soil by adding or removing fine particles of soil or organic material. It also affects the moisture content of soils by influencing the rate of evaporation.

Climate can also have more localized effects. For example, north- and east-facing slopes tend to be cooler and wetter than south- and west-facing slopes. Depressional areas generally have cooler temperatures for a longer part of the year than summits and slopes of hills.

Washburn County has a cool, subhumid continental climate that favors the growth of trees and the formation of leached, acid soils with a thin, dark surface layer and a clay-enriched subsoil.

## **Living Organisms**

Living organisms, such as plants, bacteria, fungi, insects, earthworms, nematodes, and rodents, influence the formation of soils. In addition to providing organic matter to the soil, their activities result in the development of soil structure and the formation of voids in the soil and thus encourage the transferral of clay and nutrients from the upper layers to the subsoil.



Plants generally have more influence than other living organisms on soil formation. Plant roots excrete substances that act on the parent material to bring nutrients or mineral substances into solution. These nutrients are translocated by plant roots upward to stems and leaves. When the plants die, minerals and nutrients are released to the upper soil layers. The organic acids formed from the decaying plant residue accelerate soil formation by reacting with rock and mineral constituents. Plants also affect soil formation by modifying the effects of climate—for example, by removing soil moisture through evapotranspiration and by reducing the hazard of erosion.

Soil organisms decompose organic compounds and sequester nitrogen and other nutrients and make them available to plants. Organisms in the soil also enhance soil structure and porosity as they move through the soil. Roots and percolating water follow the channels created by animal activity.

## **Relief**

Relief is an important factor in soil formation because it affects drainage, aeration, and erosion.

Because relief influences runoff and drainage, it can affect the types of vegetation present and the chemical changes on and in the soil. Soil profile development occurs most rapidly in well drained, gently sloping areas. Profile development is slower on steep slopes, where runoff is rapid and the rate of water infiltration is slower. Excessive runoff reduces the amount of water that is available for leaching the soil and for use by plants, and it can increase the hazard of erosion. Differences in relief can account for the formation of different soils in similar kinds of parent material. For example, some soils in the county formed in similar kinds of parent material but have different drainage classes because they are in different positions on the landscape.

Oosterle and other somewhat poorly drained soils have redoximorphic features in the subsoil because of seasonal wetness. These soils commonly are less sloping and have a slower rate of surface runoff than the well drained soils. They are also lower on the landscape and typically receive runoff from the adjacent uplands.

Minocqua and other poorly drained and very poorly drained soils are in the lowest positions on the landscape, where runoff is very slow or ponded. They have a grayish subsoil as a result of prolonged saturation and poor aeration. The surface layer generally is darker and thicker than that of upland soils because the moisture content is more favorable for the accumulation of organic material.

In areas where accumulations of decomposing plant residue are thicker because of excessive wetness, organic soils have formed. Beseman, Cathro, and Markey soils are examples of soils that formed in organic material 16 to 51 inches thick over mineral deposits. Greenwood and Seelyeville soils are examples of soils that formed in organic material more than 51 inches thick.

## **Time**

Time is required for the formation of soil. In most cases, the longer the other factors of soil formation have been allowed to act on the parent material, the more profile development can occur. Soils that are forming in parent material that has been deposited relatively recently, such as Fordum, Totagatic, and Winterfield soils, show very little profile development.

In upland areas that support woodland vegetation, the soils that have developed are characterized by organic matter that was produced by the decay of leaves, limbs, and trunks. This decay produced acids that percolated through the surface litter and into the soil and increased the mobility of clay, organic material, and oxides, which allowed these substances to be leached away or to accumulate in the subsoil. Over a period of time, clay, organic matter, and oxides were removed from the surface layer and a thin

bleached subsurface layer formed just below it. The clay, organic matter, and oxides accumulated in the subsoil horizons below this subsurface layer in the form of thin films on individual soil particles, on peds, and along cracks and pores. Freeon soils are examples of soils that formed in an area of woodland vegetation.

## Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories (Soil Survey Staff, 1999 and 2003). Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. Table 1 shows the classification of the soils in the survey area. The categories are defined in the following paragraphs.

**ORDER.** Twelve soil orders are recognized. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol*. An example is Alfisol.

**SUBORDER.** Each order is divided into suborders primarily on the basis of properties that influence soil genesis and are important to plant growth or properties that reflect the most important variables within the orders. The last syllable in the name of a suborder indicates the order. An example is Aqualf (*Aqu*, meaning water, plus *alf*, from Alfisol).

**GREAT GROUP.** Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; type of saturation; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Epiaqualfs (*Epi*, meaning on or above, plus *aqualf*, the suborder of the Alfisols that has an aquatic moisture regime).

**SUBGROUP.** Each great group has a typic subgroup. Other subgroups are intergrades or extragrades. The typic subgroup is the central concept of the great group; it is not necessarily the most extensive. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but do not indicate transitions to any other taxonomic class. Each subgroup is identified by one or more adjectives preceding the name of the great group. An example is Mollic Epiaqualfs.

**FAMILY.** Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties are those of horizons below plow depth where there is much biological activity. Among the properties and characteristics considered are particle-size class, mineralogy class, cation-exchange activity class, soil temperature regime, soil depth, and reaction class. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is fine-silty, mixed, superactive, frigid Mollic Epiaqualfs.

**SERIES.** The series consists of soils within a family that have horizons similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile. An example is the Barronett series.

The Official Series Descriptions (OSDs) provide the most current information about the series mapped in Washburn County. These descriptions are available on the Web at <http://soils.usda.gov>.

Table 1.--Classification of the Soils

Soil name	Family or higher taxonomic class
Aftad-----	Coarse-loamy, mixed, superactive, frigid Oxyaquic GlossudalFs
Amery-----	Coarse-loamy, mixed, superactive, frigid Haplic GlossudalFs
Anigon-----	Fine-silty over sandy or sandy-skeletal, mixed, superactive, frigid Haplic GlossudalFs
Antigo-----	Coarse-loamy over sandy or sandy-skeletal, mixed, superactive, frigid Haplic GlossudalFs
Au Gres-----	Sandy, mixed, frigid Typic Endoaquods
Ausable-----	Sandy, mixed, frigid Histic Humaquepts
Barronett-----	Fine-silty, mixed, superactive, frigid Mollic EpiaqualFs
Beseman-----	Loamy, mixed, dysic, frigid Terric HaplosapristS
Billyboy-----	Coarse-loamy over sandy or sandy-skeletal, mixed, superactive, frigid Oxyaquic GlossudalFs
Bowstring-----	Euic, frigid Fluvaquentic HaplosapristS
Brill-----	Fine-silty over sandy or sandy-skeletal, mixed, superactive, frigid Haplic GlossudalFs
Capitola-----	Coarse-loamy, mixed, superactive, frigid Mollic EpiaqualFs
Cathro-----	Loamy, mixed, euic, frigid Terric HaplosapristS
Chetek-----	Coarse-loamy, mixed, superactive, frigid Inceptic HapludalFs
Comstock-----	Fine-silty, mixed, superactive, frigid Aquic GlossudalFs
Cress-----	Sandy, mixed, frigid Humic Dystrudepts
Croswell-----	Sandy, mixed, frigid Oxyaquic Haplorthods
Crystal Lake-----	Fine-silty, mixed, superactive, frigid Oxyaquic GlossudalFs
Cublake-----	Sandy, mixed, frigid Oxyaquic Haplorthods
Dawson-----	Sandy or sandy-skeletal, mixed, dysic, frigid Terric HaplosapristS
Dody-----	Clayey, smectitic, frigid Arenic AlbaqualFs
Fenander-----	Coarse-loamy, mixed, superactive, frigid Udollic EpiaqualFs
Flink-----	Sandy, mixed, frigid Typic Epiaquods
Fordum-----	Coarse-loamy, mixed, superactive, nonacid, frigid Mollic Fluvaquents
Freeon-----	Coarse-loamy, mixed, superactive, frigid Oxyaquic GlossudalFs
Fremstadt-----	Sandy, mixed, frigid Arenic HapludalFs
Friendship-----	Mixed, frigid Typic Udipsamments
Frogcreek-----	Coarse-loamy, mixed, superactive, frigid Oxyaquic GlossudalFs
Glendenning-----	Coarse-loamy, mixed, superactive, frigid Aquic GlossudalFs
Graycalm-----	Mixed, frigid Lamellic Udipsamments
Grayling-----	Mixed, frigid Typic Udipsamments
Greenwood-----	Dysic, frigid Typic Haplohemists
Grettum-----	Mixed, frigid Lamellic Udipsamments
Haugen-----	Coarse-loamy, mixed, superactive, frigid Oxyaquic GlossudalFs
Karlsborg-----	Very-fine, smectitic, frigid Oxyaquic HapludalFs
Keweenaw-----	Sandy, mixed, frigid Alfic Haplorthods
Lenroot-----	Mixed, frigid Oxyaquic Udipsamments
Loxley-----	Dysic, frigid Typic HaplosapristS
Lupton-----	Euic, frigid Typic HaplosapristS
Magnor-----	Coarse-loamy, mixed, superactive, frigid Aquic GlossudalFs
Magroc-----	Coarse-loamy, mixed, superactive, frigid Aquic GlossudalFs
Mahtomedi-----	Mixed, frigid Typic Udipsamments
Manitowish-----	Sandy, mixed, frigid Oxyaquic Haplorthods
Markey-----	Sandy or sandy-skeletal, mixed, euic, frigid Terric HaplosapristS
Meehan-----	Mixed, frigid Aquic Udipsamments
Meenon-----	Clayey, smectitic, frigid Aquic Arenic HapludalFs
Menahga-----	Mixed, frigid Typic Udipsamments
Metonga-----	Coarse-loamy, mixed, superactive, frigid Entic Haplorthods
Minocqua-----	Coarse-loamy over sandy or sandy-skeletal, mixed, superactive, nonacid, frigid Typic Endoaquepts
Newson-----	Mixed, frigid Humaqueptic Psammaquents
Oesterle-----	Coarse-loamy, mixed, superactive, frigid Aquic GlossudalFs
Ossmer-----	Coarse-loamy over sandy or sandy-skeletal, mixed, superactive, frigid Aquic GlossudalFs
Padus-----	Coarse-loamy, mixed, superactive, frigid Alfic Haplorthods
Parkfalls-----	Coarse-loamy, mixed, superactive, frigid Alfic Epiaquods
Pence-----	Sandy, isotic, frigid Typic Haplorthods
Perchlake-----	Mixed, frigid Aquic Udipsamments
Perida-----	Clayey, smectitic, frigid Arenic HapludalFs
Plover-----	Coarse-loamy, mixed, superactive, frigid Aquic GlossudalFs
Poskin-----	Fine-silty over sandy or sandy-skeletal, mixed, superactive, frigid Aquic GlossudalFs
Rib-----	Fine-silty over sandy or sandy-skeletal, mixed, superactive, frigid Mollic EndoaqualFs
Rifle-----	Euic, frigid Typic Haplohemists
Rosholt-----	Coarse-loamy, mixed, superactive, frigid Haplic GlossudalFs
Sayner-----	Sandy, mixed, frigid Entic Haplorthods

Table 1.--Classification of the Soils--Continued

Soil name	Family or higher taxonomic class
Scoba-----	Coarse-loamy, mixed, superactive, frigid Haplic Glossudalfs
Sconsin-----	Coarse-loamy over sandy or sandy-skeletal, mixed, superactive, frigid Haplic Glossudalfs
Scott Lake-----	Coarse-loamy, mixed, superactive, frigid Oxyaquic Glossudalfs
Seelyeville-----	Euic, frigid Typic Haplosaprists
Sissabagama-----	Mixed, frigid Oxyaquic Udipsamments
Slimlake-----	Sandy, mixed, frigid Oxyaquic Dystrudepts
Spoonerhill-----	Sandy, mixed, frigid Oxyaquic Dystrudepts
Stanberry-----	Coarse-loamy, isotic, superactive, frigid Alfic Oxyaquic Haplorthods
Stinnett-----	Coarse-loamy, mixed, superactive, frigid Aquic Glossudalfs
Tacoosh-----	Loamy, mixed, euic, frigid Terric Haplohemists
Tawas-----	Sandy or sandy-skeletal, mixed, euic, frigid Terric Haplosaprists
Tipler-----	Coarse-loamy, mixed, superactive, frigid Alfic Oxyaquic Haplorthods
Totagatic-----	Sandy, mixed, frigid Mollic Fluvaquents
Vilas-----	Sandy, mixed, frigid Entic Haplorthods
Winterfield-----	Mixed, frigid Aquic Udipsamments
Worcester-----	Coarse-loamy, mixed, superactive, frigid Argic Endoaquods
Wozny-----	Coarse-loamy, mixed, superactive, frigid Umbric Epiaqualfs
Wurtsmith-----	Mixed, frigid Oxyaquic Udipsamments

## Soil Map Unit Descriptions

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The map units delineated on the soil maps in this survey represent the soils or miscellaneous areas in the survey area. These soils or miscellaneous areas are listed as individual components in the map unit descriptions. The map unit descriptions in this section, along with the maps, can be used to determine the suitability and potential of a unit for specific uses. They also can be used to plan the management needed for those uses. More information about each map unit is provided in the tables (see Contents).

A map unit delineation on the soil maps represents an area on the landscape. It is identified by differences in the properties and taxonomic classification of components and by the percentage of each component in the map unit.

Components that are dissimilar, or contrasting, are identified in the map unit description. Dissimilar components are those that have properties and behavioral characteristics divergent enough from those of the major components to affect use or to require different management. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps.

Components that are similar to the major components (noncontrasting) are not identified in the map unit description. Similar components are those that have properties and behavioral characteristics similar enough to those of the major components that they do not affect use or require different management.

The presence of multiple components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into segments that have similar use and management requirements. The delineation of such landscape segments on the map provides sufficient information for the development of resource plans, but if intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol is used for each map unit on the soil maps. This symbol precedes the map unit name in the map unit descriptions. Each description includes general information about the unit. The map unit descriptions include representative values in feet and the months in which a wet zone (a zone in which the soil moisture status is wet) is highest and lowest in the soil profile and ponding is shallowest and deepest on the soil surface. The descriptions also include the frequency of flooding (if it occurs) and the months in which flooding is most frequent and least frequent. Tables 26, 27, and 28 provide a complete display of this data for every month of the year. The available water capacity given in each map unit description is calculated for all horizons in the upper 60 inches of the soil profile. The organic matter content displayed in each map unit description is calculated for all horizons in the upper 10 inches of the soil profile, except those that represent the surface duff layer on forested soils. Table 24 provides a complete display of available water capacity and organic matter content by horizon.

The principal hazards and limitations to be considered in planning for specific uses are described in other sections of this survey.



Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer or of the underlying layers, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer or of the underlying layers. They also can differ in slope, stoniness, salinity, wetness, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. The name of a soil phase commonly indicates a feature that affects use or management. For example, Stanberry sandy loam, 1 to 6 percent slopes, very stony, is a phase of the Stanberry series.

A map unit is named for the component or components that make up a dominant percentage of the map unit. Many map units consist of one dominant component. These map units are consociations. Stinnett silt loam, 0 to 4 percent slopes, very stony, is an example.

Some map units are made up of two or more dominant components. These map units are complexes or undifferentiated groups.

A *complex* consists of two or more components in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. Attempting to delineate the individual components of a complex would result in excessive clutter that could make the map illegible. The pattern and proportion of the components in a complex are somewhat similar in all areas. Haugen, very stony-Greenwood complex, 0 to 15 percent slopes, is an example.

An *undifferentiated group* is made up of two or more components that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the components in a mapped area are not uniform. An area can be made up of only one of the dominant components, or it can be made up of all of them. Seelyeville and Markey soils, 0 to 1 percent slopes, is an undifferentiated group in this survey area.

This survey includes miscellaneous areas. Such areas have little or no soil material and support little or no vegetation. Map unit 2015, Pits, is an example.

Table 2 gives the acreage and proportionate extent of each map unit. Other tables give properties of the soils and the limitations, capabilities, and potentials for many uses. The Glossary defines many of the terms used in describing the soils or miscellaneous areas.

### **3A—Totagatic-Bowstring-Ausable complex, 0 to 2 percent slopes, frequently flooded**

#### ***Component Description***

##### **Totagatic and similar soils**

*Extent:* 30 to 60 percent of the mapped areas

*Geomorphic setting:* Flood plains

*Slope range:* 0 to 2 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Poorly drained

*Parent material:* Mostly sandy alluvium

*Lowest frequency of flooding (if it occurs):* Rare (January, February, July, August, December)

*Highest frequency of flooding:* Frequent (April, May)

*Shallowest depth to wet zone:* At the surface (April, May, November, December)

*Deepest depth to wet zone:* 2.5 feet (February, August)

*Months in which ponding does not occur:* January, February, March, June, July, August, September, October, November, December

*Deepest ponding:* 0.5 foot (April, May)

*Available water capacity to a depth of 60 inches:* 5.4 inches

*Content of organic matter in the upper 10 inches:* 28.2 percent

*Typical profile:*

- Oa—0 to 4 inches; muck
- Bw1—4 to 8 inches; loamy fine sand
- Bw2—8 to 17 inches; fine sand
- Cg1—17 to 28 inches; fine sand
- Cg2—28 to 46 inches; sand
- C—46 to 70 inches; sand
- C'g—70 to 80 inches; sand

### **Bowstring and similar soils**

*Extent:* 15 to 60 percent of the mapped areas

*Geomorphic setting:* Flood plains

*Slope range:* 0 to 1 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Very poorly drained

*Parent material:* Highly decomposed organic material that is stratified with thin layers of sandy or loamy material

*Lowest frequency of flooding (if it occurs):* Rare (January, February, July, August, December)

*Highest frequency of flooding:* Frequent (April, May)

*Shallowest depth to wet zone:* At the surface (April, May, November, December)

*Deepest depth to wet zone:* 2.5 feet (February, August)

*Months in which ponding does not occur:* January, February, March, June, July, August, September, October, December

*Deepest ponding:* 0.5 foot (April, May, November)

*Available water capacity to a depth of 60 inches:* 21.0 inches

*Content of organic matter in the upper 10 inches:* 80.0 percent

*Typical profile:*

- Oa—0 to 38 inches; muck
- Cg—38 to 47 inches; fine sand
- O'a—47 to 80 inches; muck

### **Ausable and similar soils**

*Extent:* 15 to 40 percent of the mapped areas

*Geomorphic setting:* Flood plains

*Slope range:* 0 to 2 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Very poorly drained

*Parent material:* Sandy alluvium with thin layers of organic material

*Lowest frequency of flooding (if it occurs):* Rare (January, February, July, August, December)

*Highest frequency of flooding:* Frequent (April, May)

*Shallowest depth to wet zone:* At the surface (April, May, November)

*Deepest depth to wet zone:* 2.5 feet (February, August)

*Months in which ponding does not occur:* January, February, March, June, July, August, September, October, December

*Deepest ponding:* 0.5 foot (April, May, November)

*Available water capacity to a depth of 60 inches:* 6.9 inches

*Content of organic matter in the upper 10 inches:* 70.0 percent

*Typical profile:*

- Oa—0 to 10 inches; muck
- Cg—10 to 60 inches; sand

### ***Minor Dissimilar Components***

#### **Winterfield soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Moquah soils**

*Extent:* 0 to 5 percent of the mapped areas

#### **Water**

*Extent:* 0 to 5 percent of the mapped areas

## **22A—Comstock silt loam, 0 to 3 percent slopes**

### ***Component Description***

#### **Comstock and similar soils**

*Extent:* 80 to 100 percent of the mapped areas

*Geomorphic setting:* Lake plains; stream terraces

*Position on the landform:* Footslopes and summits

*Slope range:* 0 to 3 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Somewhat poorly drained

*Parent material:* Silty lacustrine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 0.5 foot (April)

*Deepest depth to wet zone:* 5.0 feet (September)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 11.4 inches

*Content of organic matter in the upper 10 inches:* 2.5 percent

*Typical profile:*

Ap—0 to 8 inches; silt loam

E—8 to 15 inches; silt loam

B/E—15 to 21 inches; silt loam

Bt—21 to 34 inches; silt loam

BC—34 to 44 inches; stratified silt loam to very fine sand

C—44 to 60 inches; stratified silt loam to very fine sand

### ***Minor Dissimilar Components***

#### **Barronett soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Crystal Lake soils**

*Extent:* 0 to 10 percent of the mapped areas

## **24A—Poskin silt loam, 0 to 3 percent slopes**

### ***Component Description***

#### **Poskin and similar soils**

*Extent:* 70 to 100 percent of the mapped areas

*Geomorphic setting:* Outwash plains; stream terraces

*Position on the landform:* Footslopes

*Slope range:* 0 to 3 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Somewhat poorly drained

*Parent material:* Loess or silty alluvium underlain by stratified sandy and gravelly outwash

*Flooding:* None

*Shallowest depth to wet zone:* 0.5 foot (April)

*Deepest depth to wet zone:* 4.0 feet (February, August)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 8.7 inches

*Content of organic matter in the upper 10 inches:* 2.8 percent

*Typical profile:*

Ap—0 to 9 inches; silt loam

E—9 to 12 inches; silt loam

E/B—12 to 19 inches; silt loam

Bt1—19 to 36 inches; silt loam

2Bt2—36 to 39 inches; sandy loam

3C—39 to 60 inches; stratified sand to very gravelly coarse sand

### ***Minor Dissimilar Components***

#### **Brander soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Brill soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Rib soils**

*Extent:* 0 to 10 percent of the mapped areas

## **27A—Scott Lake sandy loam, 0 to 3 percent slopes**

### ***Component Description***

#### **Scott Lake and similar soils**

*Extent:* 90 to 100 percent of the mapped areas

*Geomorphic setting:* Outwash plains; stream terraces

*Position on the landform:* Footslopes

*Slope range:* 0 to 3 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Moderately well drained

*Parent material:* Loamy alluvium underlain by stratified sandy and gravelly outwash

*Flooding:* None

*Shallowest depth to wet zone:* 2.5 feet (April)

*Deepest depth to wet zone:* 5.5 feet (February, August)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.6 inches

*Content of organic matter in the upper 10 inches:* 2.5 percent

*Typical profile:*

Ap—0 to 10 inches; sandy loam

E/B—10 to 17 inches; sandy loam

B/E—17 to 24 inches; sandy loam

2Bt—24 to 31 inches; gravelly loamy sand

2C—31 to 80 inches; stratified sand to very gravelly coarse sand

### ***Minor Dissimilar Components***

#### **Oesterle soils**

*Extent:* 0 to 5 percent of the mapped areas

**Rosholt soils**

*Extent:* 0 to 5 percent of the mapped areas

## **28B—Haugen-Rosholt complex, 2 to 6 percent slopes, very stony**

### ***Component Description***

**Haugen, very stony, and similar soils**

*Extent:* 20 to 75 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Summits

*Slope range:* 2 to 6 percent

*Depth to restrictive layer(s):* 60 to 80 inches to dense material

*Drainage class:* Moderately well drained

*Parent material:* Sandy loam till or mudflow sediments

*Flooding:* None

*Shallowest depth to wet zone:* 2.0 feet (March, April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, July, August, September, October)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 6.5 inches

*Content of organic matter in the upper 10 inches:* 1.2 percent

*Typical profile:*

A—0 to 4 inches; sandy loam

Bw1—4 to 15 inches; sandy loam

Bw2—15 to 23 inches; gravelly sandy loam

E/B—23 to 35 inches; gravelly sandy loam

B/E—35 to 49 inches; sandy loam

Bt—49 to 79 inches; gravelly sandy loam

Cd—79 to 80 inches; gravelly sandy loam

**Haugen and similar soils**

*Extent:* 15 to 75 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Summits

*Slope range:* 2 to 6 percent

*Depth to restrictive layer(s):* 60 to 80 inches to dense material

*Drainage class:* Moderately well drained

*Parent material:* Sandy loam till or mudflow sediments

*Flooding:* None

*Shallowest depth to wet zone:* 2.0 feet (March, April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, July, August, September, October)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 6.5 inches

*Content of organic matter in the upper 10 inches:* 1.6 percent

*Typical profile:*

Ap—0 to 7 inches; sandy loam

Bw1—7 to 15 inches; sandy loam

Bw2—15 to 23 inches; gravelly sandy loam

E/B—23 to 35 inches; gravelly sandy loam

B/E—35 to 49 inches; sandy loam

Bt—49 to 79 inches; gravelly sandy loam

Cd—79 to 80 inches; gravelly sandy loam

**Rosholt, very stony, and similar soils**

*Extent:* 10 to 75 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Summits

*Slope range:* 2 to 6 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Well drained

*Parent material:* Loamy alluvium underlain by stratified sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.6 inches

*Content of organic matter in the upper 10 inches:* 1.1 percent

*Typical profile:*

A—0 to 4 inches; sandy loam

E—4 to 10 inches; sandy loam

B/E—10 to 14 inches; sandy loam

Bt—14 to 28 inches; sandy loam

2Bt—28 to 34 inches; gravelly loamy sand

2C—34 to 60 inches; stratified sand to very gravelly coarse sand

**Rosholt and similar soils**

*Extent:* 10 to 75 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Summits

*Slope range:* 2 to 6 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Well drained

*Parent material:* Loamy alluvium underlain by stratified sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.7 inches

*Content of organic matter in the upper 10 inches:* 1.7 percent

*Typical profile:*

Ap—0 to 8 inches; sandy loam

E—8 to 10 inches; sandy loam

B/E—10 to 14 inches; sandy loam

Bt—14 to 28 inches; sandy loam

2Bt—28 to 34 inches; gravelly loamy sand

2C—34 to 60 inches; stratified sand to very gravelly coarse sand

***Minor Dissimilar Components*****Amery soils**

*Extent:* 0 to 10 percent of the mapped areas

**Scott Lake soils**

*Extent:* 0 to 10 percent of the mapped areas

**Aftad soils**

*Extent:* 0 to 5 percent of the mapped areas

**Glendenning soils**

*Extent:* 0 to 5 percent of the mapped areas

**Capitola soils**

*Extent:* 0 to 5 percent of the mapped areas

**Oesterle soils**

*Extent:* 0 to 5 percent of the mapped areas

## **28C—Haugen-Rosholt complex, 6 to 12 percent slopes, very stony**

### ***Component Description***

**Haugen, very stony, and similar soils**

*Extent:* 25 to 75 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Shoulders and backslopes

*Slope range:* 6 to 12 percent

*Depth to restrictive layer(s):* 60 to 80 inches to dense material

*Drainage class:* Moderately well drained

*Parent material:* Sandy loam till or mudflow sediments

*Flooding:* None

*Shallowest depth to wet zone:* 2.0 feet (March, April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, July, August, September, October)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 6.5 inches

*Content of organic matter in the upper 10 inches:* 1.2 percent

*Typical profile:*

A—0 to 4 inches; sandy loam

Bw1—4 to 15 inches; sandy loam

Bw2—15 to 23 inches; gravelly sandy loam

E/B—23 to 35 inches; gravelly sandy loam

B/E—35 to 49 inches; sandy loam

Bt—49 to 79 inches; gravelly sandy loam

Cd—79 to 80 inches; gravelly sandy loam

**Haugen and similar soils**

*Extent:* 10 to 75 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Backslopes and shoulders

*Slope range:* 6 to 12 percent

*Depth to restrictive layer(s):* 60 to 80 inches to dense material

*Drainage class:* Moderately well drained

*Parent material:* Sandy loam till or mudflow sediments

*Flooding:* None

*Shallowest depth to wet zone:* 2.0 feet (March, April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, July, August, September, October)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 6.5 inches

*Content of organic matter in the upper 10 inches:* 1.6 percent

*Typical profile:*

Ap—0 to 7 inches; sandy loam

Bw1—7 to 15 inches; sandy loam

Bw2—15 to 23 inches; gravelly sandy loam

E/B—23 to 35 inches; gravelly sandy loam

B/E—35 to 49 inches; sandy loam

Bt—49 to 79 inches; gravelly sandy loam

Cd—79 to 80 inches; gravelly sandy loam



**Rosholt, very stony, and similar soils**

*Extent:* 10 to 40 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Backslopes and shoulders

*Slope range:* 6 to 12 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Well drained

*Parent material:* Loamy alluvium underlain by stratified sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.6 inches

*Content of organic matter in the upper 10 inches:* 1.1 percent

*Typical profile:*

A—0 to 4 inches; sandy loam

E—4 to 10 inches; sandy loam

B/E—10 to 14 inches; sandy loam

Bt—14 to 28 inches; sandy loam

2Bt—28 to 34 inches; gravelly loamy sand

2C—34 to 60 inches; stratified sand to very gravelly coarse sand

**Rosholt and similar soils**

*Extent:* 10 to 40 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Backslopes and shoulders

*Slope range:* 6 to 12 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Well drained

*Parent material:* Loamy alluvium underlain by stratified sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.7 inches

*Content of organic matter in the upper 10 inches:* 1.7 percent

*Typical profile:*

Ap—0 to 8 inches; sandy loam

E—8 to 10 inches; sandy loam

B/E—10 to 14 inches; sandy loam

Bt—14 to 28 inches; sandy loam

2Bt—28 to 34 inches; gravelly loamy sand

2C—34 to 60 inches; stratified sand to very gravelly coarse sand

***Minor Dissimilar Components*****Amery soils**

*Extent:* 0 to 10 percent of the mapped areas

**Freeon soils**

*Extent:* 0 to 10 percent of the mapped areas

**Aftad soils**

*Extent:* 0 to 5 percent of the mapped areas

**Capitola soils**

*Extent:* 0 to 5 percent of the mapped areas

**Mahtomedi soils**

*Extent:* 0 to 5 percent of the mapped areas

**Scott Lake soils**

*Extent:* 0 to 5 percent of the mapped areas

**33B—Chetek sandy loam, 1 to 6 percent slopes*****Component Description*****Chetek and similar soils**

*Extent:* 75 to 100 percent of the mapped areas

*Geomorphic setting:* Outwash plains; stream terraces

*Position on the landform:* Backslopes and summits

*Slope range:* 1 to 6 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Somewhat excessively drained

*Parent material:* Mostly loamy alluvium underlain by stratified sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 3.5 inches

*Content of organic matter in the upper 10 inches:* 2.0 percent

*Typical profile:*

Ap—0 to 10 inches; sandy loam

Bt—10 to 16 inches; sandy loam

2Bt—16 to 20 inches; gravelly loamy sand

2C—20 to 60 inches; stratified very gravelly coarse sand to sand

***Minor Dissimilar Components*****Rosholt soils**

*Extent:* 0 to 10 percent of the mapped areas

**Cress soils**

*Extent:* 0 to 5 percent of the mapped areas

**Mahtomedi soils**

*Extent:* 0 to 5 percent of the mapped areas

**Scott Lake soils**

*Extent:* 0 to 5 percent of the mapped areas

**33C—Chetek sandy loam, 6 to 12 percent slopes*****Component Description*****Chetek and similar soils**

*Extent:* 80 to 100 percent of the mapped areas

*Geomorphic setting:* Outwash plains; stream terraces

*Position on the landform:* Shoulders and backslopes

*Slope range:* 6 to 12 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Somewhat excessively drained

*Parent material:* Mostly loamy alluvium underlain by stratified sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 3.5 inches

*Content of organic matter in the upper 10 inches:* 2.0 percent

*Typical profile:*

Ap—0 to 10 inches; sandy loam

Bt—10 to 16 inches; sandy loam

2Bt—16 to 20 inches; gravelly loamy sand

2C—20 to 60 inches; stratified very gravelly coarse sand to sand

### ***Minor Dissimilar Components***

#### **Rosholt soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Cress soils**

*Extent:* 0 to 5 percent of the mapped areas

#### **Mahtomedi soils**

*Extent:* 0 to 5 percent of the mapped areas

## **38A—Rosholt sandy loam, 0 to 2 percent slopes**

### ***Component Description***

#### **Rosholt and similar soils**

*Extent:* 80 to 100 percent of the mapped areas

*Geomorphic setting:* Stream terraces; outwash plains

*Position on the landform:* Summits

*Slope range:* 0 to 2 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Well drained

*Parent material:* Loamy alluvium underlain by stratified sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.7 inches

*Content of organic matter in the upper 10 inches:* 1.7 percent

*Typical profile:*

Ap—0 to 8 inches; sandy loam

E—8 to 10 inches; sandy loam

B/E—10 to 14 inches; sandy loam

Bt—14 to 28 inches; sandy loam

2Bt—28 to 34 inches; gravelly loamy sand

2C—34 to 60 inches; stratified sand to very gravelly coarse sand

### ***Minor Dissimilar Components***

#### **Scott Lake soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Chetek soils**

*Extent:* 0 to 5 percent of the mapped areas

#### **Aftad soils**

*Extent:* 0 to 5 percent of the mapped areas

### 38B—Rosholt sandy loam, 2 to 6 percent slopes

#### *Component Description*

##### **Rosholt and similar soils**

*Extent:* 85 to 100 percent of the mapped areas

*Geomorphic setting:* Outwash plains; stream terraces

*Position on the landform:* Summits and backslopes

*Slope range:* 2 to 6 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Well drained

*Parent material:* Loamy alluvium underlain by stratified sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.7 inches

*Content of organic matter in the upper 10 inches:* 1.7 percent

*Typical profile:*

Ap—0 to 8 inches; sandy loam

E—8 to 10 inches; sandy loam

B/E—10 to 14 inches; sandy loam

Bt—14 to 28 inches; sandy loam

2Bt—28 to 34 inches; gravelly loamy sand

2C—34 to 60 inches; stratified sand to very gravelly coarse sand

#### *Minor Dissimilar Components*

##### **Cress soils**

*Extent:* 0 to 10 percent of the mapped areas

##### **Chetek soils**

*Extent:* 0 to 10 percent of the mapped areas

##### **Antigo soils**

*Extent:* 0 to 5 percent of the mapped areas

##### **Scott Lake soils**

*Extent:* 0 to 5 percent of the mapped areas

### 38C—Rosholt sandy loam, 6 to 12 percent slopes

#### *Component Description*

##### **Rosholt and similar soils**

*Extent:* 75 to 100 percent of the mapped areas

*Geomorphic setting:* Outwash plains; stream terraces

*Position on the landform:* Shoulders and backslopes

*Slope range:* 6 to 12 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Well drained

*Parent material:* Loamy alluvium underlain by stratified sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.7 inches

*Content of organic matter in the upper 10 inches:* 1.7 percent

*Typical profile:*

Ap—0 to 8 inches; sandy loam

E—8 to 10 inches; sandy loam

B/E—10 to 14 inches; sandy loam

Bt—14 to 28 inches; sandy loam

2Bt—28 to 34 inches; gravelly loamy sand

2C—34 to 60 inches; stratified sand to very gravelly coarse sand

### ***Minor Dissimilar Components***

#### **Cress soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Chetek soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Antigo soils**

*Extent:* 0 to 5 percent of the mapped areas

## **38D—Rosholt sandy loam, 12 to 20 percent slopes**

### ***Component Description***

#### **Rosholt and similar soils**

*Extent:* 80 to 100 percent of the mapped areas

*Geomorphic setting:* Outwash plains; stream terraces

*Position on the landform:* Backslopes and shoulders

*Slope range:* 12 to 20 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Well drained

*Parent material:* Loamy alluvium underlain by stratified sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.7 inches

*Content of organic matter in the upper 10 inches:* 1.7 percent

*Typical profile:*

Ap—0 to 8 inches; sandy loam

E—8 to 10 inches; sandy loam

B/E—10 to 14 inches; sandy loam

Bt—14 to 28 inches; sandy loam

2Bt—28 to 34 inches; gravelly loamy sand

2C—34 to 60 inches; stratified sand to very gravelly coarse sand

### ***Minor Dissimilar Components***

#### **Cress soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Chetek soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Antigo soils**

*Extent:* 0 to 5 percent of the mapped areas

## 42D—Amery sandy loam, 12 to 25 percent slopes, very stony

### *Component Description*

#### **Amery and similar soils**

*Extent:* 70 to 100 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Shoulders and backslopes

*Slope range:* 12 to 25 percent

*Depth to restrictive layer(s):* 60 to 80 inches to dense material

*Drainage class:* Well drained

*Parent material:* Sandy loam till or mudflow sediments

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 7.2 inches

*Content of organic matter in the upper 10 inches:* 0.8 percent

*Typical profile:*

A—0 to 3 inches; sandy loam

Bw—3 to 22 inches; sandy loam

E/B—22 to 34 inches; sandy loam

B/E—34 to 41 inches; gravelly sandy loam

Bt1—41 to 57 inches; gravelly sandy loam

Bt2—57 to 71 inches; sandy loam

Cd—71 to 80 inches; sandy loam

### *Minor Dissimilar Components*

#### **Cress soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Haugen soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Capitola soils**

*Extent:* 0 to 5 percent of the mapped areas

#### **Aftad soils**

*Extent:* 0 to 5 percent of the mapped areas

## 43B—Antigo silt loam, 1 to 6 percent slopes

### *Component Description*

#### **Antigo and similar soils**

*Extent:* 70 to 100 percent of the mapped areas

*Geomorphic setting:* Outwash plains; stream terraces

*Position on the landform:* Summits, backslopes, and shoulders

*Slope range:* 1 to 6 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Well drained

*Parent material:* Loess or silty alluvium underlain by sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 7.3 inches

*Content of organic matter in the upper 10 inches:* 1.9 percent

*Typical profile:*

- Ap—0 to 9 inches; silt loam
- E—9 to 12 inches; silt loam
- B/E—12 to 19 inches; silt loam
- Bt1—19 to 28 inches; silt loam
- 2Bt2—28 to 31 inches; loam
- 2Bt3—31 to 33 inches; very gravelly sandy loam
- 3C—33 to 60 inches; stratified sand to very gravelly coarse sand

### ***Minor Dissimilar Components***

#### **Brill soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Sconsin soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Billyboy soils**

*Extent:* 0 to 5 percent of the mapped areas

#### **Rosholt soils**

*Extent:* 0 to 5 percent of the mapped areas

## **43C—Antigo silt loam, 6 to 15 percent slopes**

### ***Component Description***

#### **Antigo and similar soils**

*Extent:* 80 to 100 percent of the mapped areas

*Geomorphic setting:* Outwash plains; stream terraces

*Position on the landform:* Backslopes and shoulders

*Slope range:* 6 to 15 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Well drained

*Parent material:* Loess or silty alluvium underlain by sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 7.3 inches

*Content of organic matter in the upper 10 inches:* 1.9 percent

*Typical profile:*

- Ap—0 to 9 inches; silt loam
- E—9 to 12 inches; silt loam
- B/E—12 to 19 inches; silt loam
- Bt1—19 to 28 inches; silt loam
- 2Bt2—28 to 31 inches; loam
- 2Bt3—31 to 33 inches; very gravelly sandy loam
- 3C—33 to 60 inches; stratified sand to very gravelly coarse sand

### ***Minor Dissimilar Components***

#### **Padus soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Rosholt soils**

*Extent:* 0 to 10 percent of the mapped areas



## 43D—Antigo silt loam, 15 to 30 percent slopes

### *Component Description*

#### **Antigo and similar soils**

*Extent:* 80 to 100 percent of the mapped areas

*Geomorphic setting:* Stream terraces; outwash plains

*Position on the landform:* Backslopes and shoulders

*Slope range:* 15 to 30 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Well drained

*Parent material:* Loess or silty alluvium underlain by sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 7.3 inches

*Content of organic matter in the upper 10 inches:* 1.9 percent

*Typical profile:*

Ap—0 to 9 inches; silt loam

E—9 to 12 inches; silt loam

B/E—12 to 19 inches; silt loam

Bt1—19 to 28 inches; silt loam

2Bt2—28 to 31 inches; loam

2Bt3—31 to 33 inches; very gravelly sandy loam

3C—33 to 60 inches; stratified sand to very gravelly coarse sand

### *Minor Dissimilar Components*

#### **Padus soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Rosholt soils**

*Extent:* 0 to 10 percent of the mapped areas

## 48A—Brill silt loam, 0 to 3 percent slopes

### *Component Description*

#### **Brill and similar soils**

*Extent:* 80 to 100 percent of the mapped areas

*Geomorphic setting:* Outwash plains; stream terraces

*Position on the landform:* Summits

*Slope range:* 0 to 3 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Moderately well drained

*Parent material:* Loess or silty alluvium underlain by stratified sandy and gravelly outwash

*Flooding:* None

*Shallowest depth to wet zone:* 1.5 feet (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, March, June, July, August, September, October, November, December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 8.0 inches

*Content of organic matter in the upper 10 inches:* 2.3 percent

*Typical profile:*

Ap—0 to 7 inches; silt loam

E—7 to 11 inches; silt loam  
E/B—11 to 19 inches; silt loam  
Bt—19 to 34 inches; silt loam  
2Bt—34 to 38 inches; loam  
3C—38 to 60 inches; stratified sand to very gravelly coarse sand

***Minor Dissimilar Components***

**Anigon soils**

*Extent:* 0 to 10 percent of the mapped areas

**Poskin soils**

*Extent:* 0 to 5 percent of the mapped areas

**Rosholt soils**

*Extent:* 0 to 5 percent of the mapped areas

**63A—Crystal Lake silt loam, 0 to 2 percent slopes**

***Component Description***

**Crystal Lake and similar soils**

*Extent:* 85 to 100 percent of the mapped areas

*Geomorphic setting:* Kames; lake plains; stream terraces

*Position on the landform:* Summits

*Slope range:* 0 to 2 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Moderately well drained

*Parent material:* Mostly silty lacustrine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 2.0 feet (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, March, August, September, October, December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 12.4 inches

*Content of organic matter in the upper 10 inches:* 2.5 percent

*Typical profile:*

Ap—0 to 8 inches; silt loam  
E—8 to 12 inches; silt loam  
B/E—12 to 20 inches; silt loam  
Bt—20 to 32 inches; silt loam  
C—32 to 60 inches; stratified silt loam to very fine sand

***Minor Dissimilar Components***

**Comstock soils**

*Extent:* 0 to 15 percent of the mapped areas

**63B—Crystal Lake silt loam, 2 to 6 percent slopes**

***Component Description***

**Crystal Lake and similar soils**

*Extent:* 85 to 100 percent of the mapped areas

*Geomorphic setting:* Lake plains; stream terraces

*Position on the landform:* Summits, backslopes, and shoulders

*Slope range:* 2 to 6 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Moderately well drained

*Parent material:* Mostly silty lacustrine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 2.0 feet (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, March, August, September, October, December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 12.4 inches

*Content of organic matter in the upper 10 inches:* 2.5 percent

*Typical profile:*

Ap—0 to 8 inches; silt loam

E—8 to 12 inches; silt loam

B/E—12 to 20 inches; silt loam

Bt—20 to 32 inches; silt loam

C—32 to 60 inches; stratified silt loam to very fine sand

### ***Minor Dissimilar Components***

#### **Aftad soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Comstock soils**

*Extent:* 0 to 10 percent of the mapped areas

## **63C—Crystal Lake silt loam, 6 to 12 percent slopes**

### ***Component Description***

#### **Crystal Lake and similar soils**

*Extent:* 90 to 100 percent of the mapped areas

*Geomorphic setting:* Lake plains; stream terraces

*Position on the landform:* Backslopes and shoulders

*Slope range:* 6 to 12 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Moderately well drained

*Parent material:* Mostly silty lacustrine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 2.0 feet (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, March, July, August, September, October, November, December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 12.4 inches

*Content of organic matter in the upper 10 inches:* 2.5 percent

*Typical profile:*

Ap—0 to 8 inches; silt loam

E—8 to 12 inches; silt loam

B/E—12 to 20 inches; silt loam

Bt—20 to 32 inches; silt loam

C—32 to 60 inches; stratified silt loam to very fine sand

### ***Minor Dissimilar Components***

#### **Aftad soils**

*Extent:* 0 to 10 percent of the mapped areas

## 63E—Crystal Lake silt loam, 20 to 35 percent slopes

### *Component Description*

#### **Crystal Lake and similar soils**

*Extent:* 90 to 100 percent of the mapped areas

*Geomorphic setting:* Lake plains; stream terraces

*Position on the landform:* Backslopes and shoulders

*Slope range:* 20 to 35 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Moderately well drained

*Parent material:* Mostly silty lacustrine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 2.5 feet (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, March, June, July, August, September, October, November, December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 12.4 inches

*Content of organic matter in the upper 10 inches:* 2.5 percent

*Typical profile:*

Ap—0 to 8 inches; silt loam

E—8 to 12 inches; silt loam

B/E—12 to 20 inches; silt loam

Bt—20 to 32 inches; silt loam

C—32 to 60 inches; stratified silt loam to very fine sand

### *Minor Dissimilar Components*

#### **Antigo soils**

*Extent:* 0 to 10 percent of the mapped areas

## 64A—Totagatic-Winterfield complex, 0 to 2 percent slopes, frequently flooded

### *Component Description*

#### **Totagatic and similar soils**

*Extent:* 45 to 65 percent of the mapped areas

*Geomorphic setting:* Flood plains

*Slope range:* 0 to 1 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Poorly drained

*Parent material:* Mostly sandy alluvium

*Lowest frequency of flooding (if it occurs):* Rare (January, February, July, August, December)

*Highest frequency of flooding:* Frequent (April, May)

*Shallowest depth to wet zone:* At the surface (April, May, November, December)

*Deepest depth to wet zone:* 2.5 feet (February, August)

*Months in which ponding does not occur:* January, February, March, June, July, August, September, October, November, December

*Deepest ponding:* 0.5 foot (April, May)

*Available water capacity to a depth of 60 inches:* 5.4 inches

*Content of organic matter in the upper 10 inches:* 28.2 percent

*Typical profile:*

Oa—0 to 4 inches; muck

Bw1—4 to 8 inches; loamy fine sand

Bw2—8 to 17 inches; fine sand

Cg1—17 to 28 inches; fine sand

Cg2—28 to 46 inches; sand

C—46 to 70 inches; sand

C'g—70 to 80 inches; sand

#### **Winterfield and similar soils**

*Extent:* 25 to 55 percent of the mapped areas

*Geomorphic setting:* Flood plains

*Slope range:* 1 to 2 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Somewhat poorly drained

*Parent material:* Sandy alluvium

*Lowest frequency of flooding (if it occurs):* Rare (January, February, December)

*Highest frequency of flooding:* Frequent (April)

*Shallowest depth to wet zone:* 0.5 foot (April)

*Deepest depth to wet zone:* 3.0 feet (September, October)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.4 inches

*Content of organic matter in the upper 10 inches:* 2.2 percent

*Typical profile:*

A—0 to 7 inches; loamy sand

C—7 to 60 inches; sand

#### ***Minor Dissimilar Components***

#### **Ausable soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Bowstring soils**

*Extent:* 0 to 10 percent of the mapped areas

### **69B—Keweenaw-Sayner-Vilas complex, 2 to 6 percent slopes, stony**

#### ***Component Description***

#### **Keweenaw and similar soils**

*Extent:* 20 to 80 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Summits

*Slope range:* 2 to 6 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Well drained

*Parent material:* Sandy till

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 5.8 inches

*Content of organic matter in the upper 10 inches:* 0.6 percent

*Typical profile:*

A—0 to 2 inches; loamy sand

E—2 to 4 inches; loamy sand

Bs1,Bs2—4 to 16 inches; loamy sand  
 Bs3—16 to 20 inches; loamy sand  
 E'—20 to 27 inches; loamy sand  
 E/B—27 to 43 inches; sand  
 B/E—43 to 75 inches; loamy sand  
 C—75 to 80 inches; loamy sand

#### **Sayner and similar soils**

*Extent:* 20 to 40 percent of the mapped areas  
*Geomorphic setting:* Disintegration moraines  
*Position on the landform:* Summits  
*Slope range:* 2 to 6 percent  
*Depth to restrictive layer(s):* More than 80 inches  
*Drainage class:* Excessively drained  
*Parent material:* Sandy and gravelly outwash  
*Flooding:* None  
*Depth to wet zone:* More than 6.7 feet all year  
*Ponding:* None  
*Available water capacity to a depth of 60 inches:* 3.1 inches  
*Content of organic matter in the upper 10 inches:* 1.4 percent  
*Typical profile:*

A—0 to 2 inches; loamy sand  
 E—2 to 4 inches; loamy sand  
 Bs1—4 to 7 inches; loamy sand  
 Bs2—7 to 14 inches; sand  
 BC—14 to 22 inches; gravelly sand  
 C—22 to 60 inches; stratified sand to very gravelly coarse sand

#### **Vilas and similar soils**

*Extent:* 10 to 30 percent of the mapped areas  
*Geomorphic setting:* Disintegration moraines  
*Position on the landform:* Summits  
*Slope range:* 2 to 6 percent  
*Depth to restrictive layer(s):* More than 80 inches  
*Drainage class:* Excessively drained  
*Parent material:* Sandy outwash  
*Flooding:* None  
*Depth to wet zone:* More than 6.7 feet all year  
*Ponding:* None  
*Available water capacity to a depth of 60 inches:* 4.3 inches  
*Content of organic matter in the upper 10 inches:* 1.5 percent  
*Typical profile:*

A—0 to 2 inches; loamy sand  
 E—2 to 4 inches; loamy sand  
 Bs1—4 to 11 inches; loamy sand  
 Bs2—11 to 23 inches; sand  
 B—23 to 32 inches; sand  
 C—32 to 80 inches; sand

#### ***Minor Dissimilar Components***

#### **Pence soils**

*Extent:* 0 to 10 percent of the mapped areas

## **69C—Keweenaw-Sayner-Vilas complex, 6 to 15 percent slopes, stony**

### ***Component Description***

#### **Keweenaw and similar soils**

*Extent:* 20 to 80 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Shoulders and backslopes

*Slope range:* 6 to 15 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Well drained

*Parent material:* Sandy till

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 5.8 inches

*Content of organic matter in the upper 10 inches:* 0.6 percent

*Typical profile:*

A—0 to 2 inches; loamy sand

E—2 to 4 inches; loamy sand

Bs1,Bs2—4 to 16 inches; loamy sand

Bs3—16 to 20 inches; loamy sand

E'—20 to 27 inches; loamy sand

E/B—27 to 43 inches; sand

B/E—43 to 75 inches; loamy sand

C—75 to 80 inches; loamy sand

#### **Sayner and similar soils**

*Extent:* 20 to 40 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Backslopes and shoulders

*Slope range:* 6 to 15 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Excessively drained

*Parent material:* Sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 3.1 inches

*Content of organic matter in the upper 10 inches:* 1.4 percent

*Typical profile:*

A—0 to 2 inches; loamy sand

E—2 to 4 inches; loamy sand

Bs1—4 to 7 inches; loamy sand

Bs2—7 to 14 inches; sand

BC—14 to 22 inches; gravelly sand

C—22 to 60 inches; stratified sand to very gravelly coarse sand

#### **Vilas and similar soils**

*Extent:* 10 to 30 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Backslopes and shoulders

*Slope range:* 6 to 15 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Excessively drained



*Parent material:* Sandy outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.3 inches

*Content of organic matter in the upper 10 inches:* 1.5 percent

*Typical profile:*

A—0 to 2 inches; loamy sand

E—2 to 4 inches; loamy sand

Bs1—4 to 11 inches; loamy sand

Bs2—11 to 23 inches; sand

B—23 to 32 inches; sand

C—32 to 80 inches; sand

### ***Minor Dissimilar Components***

#### **Pence soils**

*Extent:* 0 to 15 percent of the mapped areas

## **69E—Keweenaw-Sayner-Vilas complex, 15 to 45 percent slopes, stony**

### ***Component Description***

#### **Keweenaw and similar soils**

*Extent:* 20 to 80 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Backslopes and shoulders

*Slope range:* 15 to 45 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Well drained

*Parent material:* Sandy till

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 5.8 inches

*Content of organic matter in the upper 10 inches:* 0.6 percent

*Typical profile:*

A—0 to 2 inches; loamy sand

E—2 to 4 inches; loamy sand

Bs1,Bs2—4 to 16 inches; loamy sand

Bs3—16 to 20 inches; loamy sand

E'—20 to 27 inches; loamy sand

E/B—27 to 43 inches; sand

B/E—43 to 75 inches; loamy sand

C—75 to 80 inches; loamy sand

#### **Sayner and similar soils**

*Extent:* 20 to 40 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Backslopes and shoulders

*Slope range:* 15 to 45 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Excessively drained

*Parent material:* Sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 3.1 inches

*Content of organic matter in the upper 10 inches:* 1.4 percent

*Typical profile:*

A—0 to 2 inches; loamy sand

E—2 to 4 inches; loamy sand

Bs1—4 to 7 inches; loamy sand

Bs2—7 to 14 inches; sand

BC—14 to 22 inches; gravelly sand

C—22 to 60 inches; stratified sand to very gravelly coarse sand

#### **Vilas and similar soils**

*Extent:* 10 to 30 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Backslopes and shoulders

*Slope range:* 15 to 45 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Excessively drained

*Parent material:* Sandy outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.3 inches

*Content of organic matter in the upper 10 inches:* 1.5 percent

*Typical profile:*

A—0 to 2 inches; loamy sand

E—2 to 4 inches; loamy sand

Bs1—4 to 11 inches; loamy sand

Bs2—11 to 23 inches; sand

B—23 to 32 inches; sand

C—32 to 80 inches; sand

#### ***Minor Dissimilar Components***

#### **Pence soils**

*Extent:* 0 to 15 percent of the mapped areas

### **74B—Vilas loamy sand, 0 to 6 percent slopes**

#### ***Component Description***

#### **Vilas and similar soils**

*Extent:* 80 to 100 percent of the mapped areas

*Geomorphic setting:* Outwash plains; outwash terraces

*Position on the landform:* Summits

*Slope range:* 0 to 6 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Excessively drained

*Parent material:* Sandy outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.3 inches

*Content of organic matter in the upper 10 inches:* 1.5 percent

*Typical profile:*

- A—0 to 2 inches; loamy sand
- E—2 to 4 inches; loamy sand
- Bs1—4 to 11 inches; loamy sand
- Bs2—11 to 23 inches; sand
- BC—23 to 32 inches; sand
- C—32 to 80 inches; sand

***Minor Dissimilar Components*****Croswell soils**

*Extent:* 0 to 10 percent of the mapped areas

**Karlin soils**

*Extent:* 0 to 10 percent of the mapped areas

**74C—Vilas loamy sand, 6 to 15 percent slopes*****Component Description*****Vilas and similar soils**

*Extent:* 90 to 100 percent of the mapped areas

*Geomorphic setting:* Outwash plains; outwash terraces

*Position on the landform:* Shoulders and backslopes

*Slope range:* 6 to 15 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Excessively drained

*Parent material:* Sandy outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.3 inches

*Content of organic matter in the upper 10 inches:* 1.5 percent

*Typical profile:*

- A—0 to 2 inches; loamy sand
- E—2 to 4 inches; loamy sand
- Bs1—4 to 11 inches; loamy sand
- Bs2—11 to 23 inches; sand
- BC—23 to 32 inches; sand
- C—32 to 80 inches; sand

***Minor Dissimilar Components*****Karlin soils**

*Extent:* 0 to 10 percent of the mapped areas

**74D—Vilas loamy sand, 15 to 30 percent slopes*****Component Description*****Vilas and similar soils**

*Extent:* 90 to 100 percent of the mapped areas

*Geomorphic setting:* Outwash plains; outwash terraces

*Position on the landform:* Shoulders and backslopes

*Slope range:* 15 to 30 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Excessively drained

*Parent material:* Sandy outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.3 inches

*Content of organic matter in the upper 10 inches:* 1.5 percent

*Typical profile:*

A—0 to 2 inches; loamy sand

E—2 to 4 inches; loamy sand

Bs1—4 to 11 inches; loamy sand

Bs2—11 to 23 inches; sand

BC—23 to 32 inches; sand

C—32 to 80 inches; sand

### ***Minor Dissimilar Components***

#### **Karlin soils**

*Extent:* 0 to 10 percent of the mapped areas

## **100B—Menahga sand, 0 to 6 percent slopes**

### ***Component Description***

#### **Menahga and similar soils**

*Extent:* 80 to 100 percent of the mapped areas

*Geomorphic setting:* Outwash plains

*Position on the landform:* Summits

*Slope range:* 0 to 6 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Excessively drained

*Parent material:* Sandy outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 3.1 inches

*Content of organic matter in the upper 10 inches:* 0.5 percent

*Typical profile:*

A—0 to 2 inches; sand

Bw—2 to 25 inches; sand

C—25 to 80 inches; sand

### ***Minor Dissimilar Components***

#### **Friendship soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Graycalm soils**

*Extent:* 0 to 5 percent of the mapped areas

## **100C—Menahga sand, 6 to 12 percent slopes**

### ***Component Description***

#### **Menahga and similar soils**

*Extent:* 85 to 100 percent of the mapped areas

*Geomorphic setting:* Outwash plains  
*Position on the landform:* Shoulders and backslopes  
*Slope range:* 6 to 12 percent  
*Depth to restrictive layer(s):* More than 80 inches  
*Drainage class:* Excessively drained  
*Parent material:* Sandy outwash  
*Flooding:* None  
*Depth to wet zone:* More than 6.7 feet all year  
*Ponding:* None  
*Available water capacity to a depth of 60 inches:* 3.8 inches  
*Content of organic matter in the upper 10 inches:* 0.3 percent  
*Typical profile:*  
     Oi—0 to 1 inch; slightly decomposed plant material  
     A—1 to 2 inches; sand  
     Bw—2 to 25 inches; sand  
     C—25 to 80 inches; sand

### ***Minor Dissimilar Components***

#### **Graycalm soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Friendship soils**

*Extent:* 0 to 3 percent of the mapped areas

## **100D—Menahga sand, 12 to 30 percent slopes**

### ***Component Description***

#### **Menahga and similar soils**

*Extent:* 80 to 100 percent of the mapped areas  
*Geomorphic setting:* Outwash plains  
*Position on the landform:* Backslopes and shoulders  
*Slope range:* 12 to 30 percent  
*Depth to restrictive layer(s):* More than 80 inches  
*Drainage class:* Excessively drained  
*Parent material:* Sandy outwash  
*Flooding:* None  
*Depth to wet zone:* More than 6.7 feet all year  
*Ponding:* None  
*Available water capacity to a depth of 60 inches:* 3.8 inches  
*Content of organic matter in the upper 10 inches:* 0.3 percent  
*Typical profile:*  
     Oi—0 to 1 inch; slightly decomposed plant material  
     A—1 to 2 inches; sand  
     Bw—2 to 25 inches; sand  
     C—25 to 80 inches; sand

### ***Minor Dissimilar Components***

#### **Graycalm soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Grettum soils**

*Extent:* 0 to 10 percent of the mapped areas

## 127D—Amery-Rosholt complex, 12 to 20 percent slopes, very stony

### *Component Description*

#### **Amery and similar soils**

*Extent:* 40 to 80 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Backslopes and shoulders

*Slope range:* 12 to 20 percent

*Depth to restrictive layer(s):* 60 to 80 inches to dense material

*Drainage class:* Well drained

*Parent material:* Sandy loam till or mudflow sediments

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 7.2 inches

*Content of organic matter in the upper 10 inches:* 0.8 percent

*Typical profile:*

A—0 to 3 inches; sandy loam

Bw—3 to 22 inches; sandy loam

E/B—22 to 34 inches; sandy loam

B/E—34 to 41 inches; gravelly sandy loam

Bt1—41 to 57 inches; gravelly sandy loam

Bt2—57 to 71 inches; sandy loam

Cd—71 to 80 inches; sandy loam

#### **Rosholt and similar soils**

*Extent:* 15 to 60 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Backslopes and shoulders

*Slope range:* 12 to 20 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Well drained

*Parent material:* Loamy alluvium underlain by stratified sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.6 inches

*Content of organic matter in the upper 10 inches:* 1.1 percent

*Typical profile:*

A—0 to 4 inches; sandy loam

E—4 to 10 inches; sandy loam

B/E—10 to 14 inches; sandy loam

Bt—14 to 28 inches; sandy loam

2Bt—28 to 34 inches; gravelly loamy sand

2C—34 to 60 inches; stratified sand to very gravelly coarse sand

### *Minor Dissimilar Components*

#### **Cress soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Mahtomedi soils**

*Extent:* 0 to 10 percent of the mapped areas

**Haugen soils**

*Extent:* 0 to 5 percent of the mapped areas

**Capitola soils**

*Extent:* 0 to 5 percent of the mapped areas

**127E—Amery-Rosholt complex, 20 to 45 percent slopes,  
very stony*****Component Description*****Amery and similar soils**

*Extent:* 40 to 80 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Backslopes and shoulders

*Slope range:* 20 to 45 percent

*Depth to restrictive layer(s):* 60 to 80 inches to dense material

*Drainage class:* Well drained

*Parent material:* Sandy loam till or mudflow sediments

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 7.2 inches

*Content of organic matter in the upper 10 inches:* 0.8 percent

*Typical profile:*

A—0 to 3 inches; sandy loam

Bw—3 to 22 inches; sandy loam

E/B—22 to 34 inches; sandy loam

B/E—34 to 41 inches; gravelly sandy loam

Bt1—41 to 57 inches; gravelly sandy loam

Bt2—57 to 71 inches; sandy loam

Cd—71 to 80 inches; sandy loam

**Rosholt and similar soils**

*Extent:* 20 to 60 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Backslopes and shoulders

*Slope range:* 20 to 45 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Well drained

*Parent material:* Loamy alluvium underlain by stratified sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.6 inches

*Content of organic matter in the upper 10 inches:* 1.1 percent

*Typical profile:*

A—0 to 4 inches; sandy loam

E—4 to 10 inches; sandy loam

B/E—10 to 14 inches; sandy loam

Bt—14 to 28 inches; sandy loam

2Bt—28 to 34 inches; gravelly loamy sand

2C—34 to 60 inches; stratified sand to very gravelly coarse sand



### ***Minor Dissimilar Components***

#### **Cress soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Mahtomedi soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Capitola soils**

*Extent:* 0 to 5 percent of the mapped areas

#### **Haugen soils**

*Extent:* 0 to 5 percent of the mapped areas

## **156B—Magnor, very stony-Magnor complex, 0 to 4 percent slopes**

### ***Component Description***

#### **Magnor, very stony, and similar soils**

*Extent:* 5 to 75 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Footslopes

*Slope range:* 0 to 4 percent

*Depth to restrictive layer(s):* 40 to 60 inches to dense material

*Drainage class:* Somewhat poorly drained

*Parent material:* Loess or silty alluvium underlain by dense loamy till

*Flooding:* None

*Shallowest depth to wet zone:* 0.5 foot (April)

*Deepest depth to wet zone:* More than 6.7 feet (July, August)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 9.1 inches

*Content of organic matter in the upper 10 inches:* 1.1 percent

*Typical profile:*

A—0 to 4 inches; silt loam

E—4 to 11 inches; silt loam

E/B—11 to 16 inches; silt loam

B/E—16 to 21 inches; silt loam

2Bt1,2Bt2—21 to 39 inches; sandy loam

2Bt3—39 to 58 inches; fine sandy loam

2Cd—58 to 60 inches; fine sandy loam

#### **Magnor and similar soils**

*Extent:* 5 to 75 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Footslopes

*Slope range:* 0 to 4 percent

*Depth to restrictive layer(s):* 40 to 60 inches to dense material

*Drainage class:* Somewhat poorly drained

*Parent material:* Loess or silty alluvium underlain by dense loamy till

*Flooding:* None

*Shallowest depth to wet zone:* 0.5 foot (April)

*Deepest depth to wet zone:* More than 6.7 feet (July, August)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 9.1 inches

*Content of organic matter in the upper 10 inches:* 1.7 percent

*Typical profile:*

Ap—0 to 8 inches; silt loam  
 E—8 to 11 inches; silt loam  
 E/B—11 to 16 inches; silt loam  
 B/E—16 to 21 inches; silt loam  
 2Bt1,2Bt2—21 to 39 inches; sandy loam  
 2Bt3—39 to 58 inches; fine sandy loam  
 2Cd—58 to 60 inches; fine sandy loam

***Minor Dissimilar Components*****Freeon, very stony, soils**

*Extent:* 0 to 15 percent of the mapped areas

**Freeon soils**

*Extent:* 0 to 10 percent of the mapped areas

**Capitola soils**

*Extent:* 0 to 10 percent of the mapped areas

## **157B—Freeon, very stony-Freeon complex, 2 to 6 percent slopes**

***Component Description*****Freeon, very stony, and similar soils**

*Extent:* 5 to 75 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Footslopes and summits

*Slope range:* 2 to 6 percent

*Depth to restrictive layer(s):* 40 to 60 inches to dense material

*Drainage class:* Moderately well drained

*Parent material:* Loess or silty alluvium underlain by dense loamy till

*Flooding:* None

*Shallowest depth to wet zone:* 1.0 foot (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, June, July, August, September)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 9.1 inches

*Content of organic matter in the upper 10 inches:* 1.1 percent

*Typical profile:*

A—0 to 4 inches; silt loam  
 E/B—4 to 19 inches; silt loam  
 2B/E—19 to 39 inches; sandy loam  
 2Bt—39 to 53 inches; sandy loam  
 2BCd—53 to 80 inches; sandy loam

**Freeon and similar soils**

*Extent:* 5 to 75 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Footslopes and summits

*Slope range:* 2 to 6 percent

*Depth to restrictive layer(s):* 40 to 60 inches to dense material

*Drainage class:* Moderately well drained

*Parent material:* Loess or silty alluvium underlain by dense loamy till

*Flooding:* None

*Shallowest depth to wet zone:* 1.0 foot (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, June, July, August, September)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 9.1 inches

*Content of organic matter in the upper 10 inches:* 1.1 percent

*Typical profile:*

Ap—0 to 4 inches; silt loam

E/B—4 to 19 inches; silt loam

2B/E—19 to 39 inches; sandy loam

2Bt—39 to 53 inches; sandy loam

2BCd—53 to 80 inches; sandy loam

### ***Minor Dissimilar Components***

#### **Magnor, very stony, soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Magnor soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Capitola soils**

*Extent:* 0 to 5 percent of the mapped areas

#### **Haugen soils**

*Extent:* 0 to 4 percent of the mapped areas

## **157C—Freeon, very stony-Freeon complex, 6 to 12 percent slopes**

### ***Component Description***

#### **Freeon, very stony, and similar soils**

*Extent:* 5 to 75 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Backslopes and shoulders

*Slope range:* 6 to 12 percent

*Depth to restrictive layer(s):* 40 to 60 inches to dense material

*Drainage class:* Moderately well drained

*Parent material:* Loess or silty alluvium underlain by dense loamy till

*Flooding:* None

*Shallowest depth to wet zone:* 1.0 foot (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, June, July, August, September)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 9.1 inches

*Content of organic matter in the upper 10 inches:* 1.1 percent

*Typical profile:*

A—0 to 4 inches; silt loam

E/B—4 to 19 inches; silt loam

2B/E—19 to 39 inches; sandy loam

2Bt—39 to 53 inches; sandy loam

2BCd—53 to 80 inches; sandy loam

#### **Freeon and similar soils**

*Extent:* 5 to 75 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Backslopes and shoulders

*Slope range:* 6 to 12 percent

*Depth to restrictive layer(s):* 40 to 60 inches to dense material

*Drainage class:* Moderately well drained

*Parent material:* Loess or silty alluvium underlain by dense loamy till

*Flooding:* None

*Shallowest depth to wet zone:* 1.0 foot (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, June, July, August, September)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 9.1 inches

*Content of organic matter in the upper 10 inches:* 1.1 percent

*Typical profile:*

Ap—0 to 4 inches; silt loam

E/B—4 to 19 inches; silt loam

2B/E—19 to 39 inches; sandy loam

2Bt—39 to 53 inches; sandy loam

2BCd—53 to 80 inches; sandy loam

### ***Minor Dissimilar Components***

#### **Magnor, very stony, soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Magnor soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Capitola soils**

*Extent:* 0 to 5 percent of the mapped areas

#### **Haugen soils**

*Extent:* 0 to 4 percent of the mapped areas

## **160A—Oesterle sandy loam, 0 to 2 percent slopes**

### ***Component Description***

#### **Oesterle and similar soils**

*Extent:* 80 to 100 percent of the mapped areas

*Geomorphic setting:* Outwash plains; stream terraces

*Position on the landform:* Footslopes

*Slope range:* 0 to 2 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Somewhat poorly drained

*Parent material:* Loamy alluvium underlain by stratified sandy and gravelly outwash

*Flooding:* None

*Shallowest depth to wet zone:* 0.5 foot (April)

*Deepest depth to wet zone:* 4.0 feet (February, August)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 5.3 inches

*Content of organic matter in the upper 10 inches:* 2.0 percent

*Typical profile:*

Ap—0 to 7 inches; sandy loam

E/B—7 to 11 inches; sandy loam

Bt—11 to 31 inches; sandy loam

2C—31 to 60 inches; stratified sand to very gravelly coarse sand

### ***Minor Dissimilar Components***

#### **Minocqua soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Scott Lake soils**

*Extent:* 0 to 10 percent of the mapped areas

## **182B—Padus sandy loam, 0 to 6 percent slopes**

### ***Component Description***

#### **Padus and similar soils**

*Extent:* 60 to 100 percent of the mapped areas

*Geomorphic setting:* Outwash plains; stream terraces; eskers

*Position on the landform:* Summits, backslopes, and shoulders

*Slope range:* 0 to 6 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Well drained

*Parent material:* Loamy alluvium underlain by sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 6.0 inches

*Content of organic matter in the upper 10 inches:* 1.5 percent

*Typical profile:*

A—0 to 2 inches; sandy loam

E—2 to 3 inches; sandy loam

Bs—3 to 19 inches; sandy loam

E/B—19 to 26 inches; sandy loam

B/E—26 to 38 inches; sandy loam

2C—38 to 60 inches; stratified sand to very gravelly coarse sand

### ***Minor Dissimilar Components***

#### **Pence soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Antigo soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Tipler soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Martha soils**

*Extent:* 0 to 5 percent of the mapped areas

## **182C—Padus sandy loam, 6 to 15 percent slopes**

### ***Component Description***

#### **Padus and similar soils**

*Extent:* 75 to 100 percent of the mapped areas

*Geomorphic setting:* Eskers; outwash plains; stream terraces

*Position on the landform:* Backslopes and shoulders

*Slope range:* 6 to 15 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Well drained

*Parent material:* Loamy alluvium underlain by sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 6.0 inches

*Content of organic matter in the upper 10 inches:* 1.5 percent

*Typical profile:*

A—0 to 2 inches; sandy loam

E—2 to 3 inches; sandy loam

Bs—3 to 19 inches; sandy loam

E/B—19 to 26 inches; sandy loam

B/E—26 to 38 inches; sandy loam

2C—38 to 60 inches; stratified sand to very gravelly coarse sand

### ***Minor Dissimilar Components***

#### **Pence soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Antigo soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Martha soils**

*Extent:* 0 to 5 percent of the mapped areas

## **192A—Worcester sandy loam, 0 to 3 percent slopes**

### ***Component Description***

#### **Worcester and similar soils**

*Extent:* 70 to 100 percent of the mapped areas

*Geomorphic setting:* Stream terraces; outwash plains

*Position on the landform:* Footslopes

*Slope range:* 0 to 3 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Somewhat poorly drained

*Parent material:* Loamy alluvium underlain by sandy and gravelly outwash

*Flooding:* None

*Shallowest depth to wet zone:* 0.5 foot (April)

*Deepest depth to wet zone:* 4.0 feet (February, August)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 5.5 inches

*Content of organic matter in the upper 10 inches:* 1.2 percent

*Typical profile:*

A—0 to 2 inches; sandy loam

E—2 to 3 inches; sandy loam

Bhs—3 to 6 inches; sandy loam

Bs—6 to 16 inches; sandy loam

B/E—16 to 20 inches; sandy loam

Bt1—20 to 32 inches; sandy loam

2Bt2—32 to 39 inches; gravelly loamy sand

2C—39 to 60 inches; stratified sand to very gravelly coarse sand

### ***Minor Dissimilar Components***

#### **Minocqua soils**

*Extent:* 0 to 15 percent of the mapped areas

**Tipler soils**

*Extent:* 0 to 15 percent of the mapped areas

**193A—Minocqua muck, 0 to 2 percent slopes*****Component Description*****Minocqua and similar soils**

*Extent:* 70 to 100 percent of the mapped areas

*Geomorphic setting:* Depressions and drainageways on outwash plains; depressions and drainageways on stream terraces

*Slope range:* 0 to 2 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Poorly drained

*Parent material:* Silty and loamy alluvium underlain by sandy and gravelly outwash

*Flooding:* None

*Shallowest depth to wet zone:* At the surface (April, May, November)

*Deepest depth to wet zone:* 2.5 feet (February, August)

*Months in which ponding does not occur:* January, February, March, June, July, August, September, October, November, December

*Deepest ponding:* 0.5 foot (April, May)

*Available water capacity to a depth of 60 inches:* 6.2 inches

*Content of organic matter in the upper 10 inches:* 18.6 percent

*Typical profile:*

Oe—0 to 4 inches; muck

Eg—4 to 15 inches; silt loam

2Bg—15 to 28 inches; loam

3C—28 to 60 inches; stratified sand to very gravelly coarse sand

***Minor Dissimilar Components*****Cathro soils**

*Extent:* 0 to 10 percent of the mapped areas

**Oesterle soils**

*Extent:* 0 to 10 percent of the mapped areas

**Worcester soils**

*Extent:* 0 to 10 percent of the mapped areas

**Minocqua soils that are flooded for brief periods**

*Extent:* 0 to 5 percent of the mapped areas

**215B—Pence sandy loam, 0 to 6 percent slopes*****Component Description*****Pence and similar soils**

*Extent:* 70 to 100 percent of the mapped areas

*Geomorphic setting:* Stream terraces; outwash plains

*Position on the landform:* Summits, shoulders, and backslopes

*Slope range:* 0 to 6 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Somewhat excessively drained

*Parent material:* Mostly loamy alluvium underlain by stratified sandy and gravelly outwash



*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.0 inches

*Content of organic matter in the upper 10 inches:* 1.3 percent

*Typical profile:*

A—0 to 3 inches; sandy loam

E—3 to 8 inches; sandy loam

Bs—8 to 15 inches; gravelly sandy loam

2BC—15 to 21 inches; gravelly coarse sand

2C—21 to 60 inches; stratified sand to very gravelly coarse sand

### ***Minor Dissimilar Components***

#### **Padus soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Manitowish soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Sayner soils**

*Extent:* 0 to 10 percent of the mapped areas

## **215C—Pence sandy loam, 6 to 15 percent slopes**

### ***Component Description***

#### **Pence and similar soils**

*Extent:* 75 to 100 percent of the mapped areas

*Geomorphic setting:* Stream terraces; outwash plains

*Position on the landform:* Backslopes and shoulders

*Slope range:* 6 to 15 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Somewhat excessively drained

*Parent material:* Mostly loamy alluvium underlain by stratified sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.0 inches

*Content of organic matter in the upper 10 inches:* 1.3 percent

*Typical profile:*

A—0 to 3 inches; sandy loam

E—3 to 8 inches; sandy loam

Bs—8 to 15 inches; gravelly sandy loam

2BC—15 to 21 inches; gravelly coarse sand

2C—21 to 60 inches; stratified sand to very gravelly coarse sand

### ***Minor Dissimilar Components***

#### **Padus soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Sayner soils**

*Extent:* 0 to 10 percent of the mapped areas

## 215D—Pence sandy loam, 15 to 30 percent slopes

### *Component Description*

#### **Pence and similar soils**

*Extent:* 75 to 100 percent of the mapped areas

*Geomorphic setting:* Stream terraces; outwash plains

*Position on the landform:* Backslopes and shoulders

*Slope range:* 15 to 30 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Somewhat excessively drained

*Parent material:* Mostly loamy alluvium underlain by stratified sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.0 inches

*Content of organic matter in the upper 10 inches:* 1.3 percent

*Typical profile:*

A—0 to 3 inches; sandy loam

E—3 to 8 inches; sandy loam

Bs—8 to 15 inches; gravelly sandy loam

2BC—15 to 21 inches; gravelly coarse sand

2C—21 to 60 inches; stratified sand to very gravelly coarse sand

### *Minor Dissimilar Components*

#### **Padus soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Pelissier soils**

*Extent:* 0 to 5 percent of the mapped areas

#### **Sayner soils**

*Extent:* 0 to 5 percent of the mapped areas

## 315A—Rib silt loam, 0 to 2 percent slopes

### *Component Description*

#### **Rib and similar soils**

*Extent:* 75 to 100 percent of the mapped areas

*Geomorphic setting:* Depressions and drainageways on stream terraces; drainageways and depressions on outwash plains

*Slope range:* 0 to 2 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Poorly drained

*Parent material:* Loess or silty alluvium underlain by stratified sandy and gravelly outwash

*Flooding:* None

*Shallowest depth to wet zone:* At the surface (April, May, November)

*Deepest depth to wet zone:* 2.5 feet (February, August)

*Months in which ponding does not occur:* January, February, March, June, July, August, September, October, November, December

*Deepest ponding:* 0.5 foot (April, May)

*Available water capacity to a depth of 60 inches:* 8.3 inches

*Content of organic matter in the upper 10 inches:* 4.8 percent

*Typical profile:*

- A—0 to 7 inches; silt loam
- Eg—7 to 10 inches; silt loam
- Btg1—10 to 32 inches; silt loam
- 2Btg2—32 to 35 inches; loam
- 3BC—35 to 37 inches; gravelly loamy sand
- 3C—37 to 60 inches; stratified sand to very gravelly coarse sand

### ***Minor Dissimilar Components***

#### **Cathro soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Poskin soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Rib soils that are flooded for brief periods**

*Extent:* 0 to 5 percent of the mapped areas

## **337A—Plover fine sandy loam, 0 to 3 percent slopes**

### ***Component Description***

#### **Plover and similar soils**

*Extent:* 75 to 100 percent of the mapped areas

*Geomorphic setting:* Lake plains; stream terraces

*Position on the landform:* Footslopes

*Slope range:* 0 to 3 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Somewhat poorly drained

*Parent material:* Stratified loamy lacustrine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 0.5 foot (April)

*Deepest depth to wet zone:* 5.0 feet (September)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 9.8 inches

*Content of organic matter in the upper 10 inches:* 2.5 percent

*Typical profile:*

- Ap—0 to 10 inches; fine sandy loam
- E—10 to 13 inches; fine sandy loam
- B/E—13 to 18 inches; fine sandy loam
- Bt—18 to 32 inches; fine sandy loam
- C—32 to 60 inches; stratified fine sand to silt

### ***Minor Dissimilar Components***

#### **Aftad soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Fenander soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Comstock soils**

*Extent:* 0 to 5 percent of the mapped areas

#### **Oesterle soils**

*Extent:* 0 to 5 percent of the mapped areas

## 368B—Mahtomedi-Cress complex, 2 to 6 percent slopes

### *Component Description*

#### **Mahtomedi and similar soils**

*Extent:* 30 to 80 percent of the mapped areas

*Geomorphic setting:* Stream terraces; outwash plains

*Position on the landform:* Summits

*Slope range:* 2 to 6 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Excessively drained

*Parent material:* Sandy outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 2.7 inches

*Content of organic matter in the upper 10 inches:* 0.5 percent

*Typical profile:*

A—0 to 5 inches; loamy sand

E—5 to 8 inches; sand

Bw1—8 to 15 inches; gravelly coarse sand

Bw2—15 to 30 inches; gravelly sand

C—30 to 60 inches; gravelly sand

#### **Cress and similar soils**

*Extent:* 15 to 60 percent of the mapped areas

*Geomorphic setting:* Stream terraces; outwash plains

*Position on the landform:* Summits

*Slope range:* 2 to 6 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Somewhat excessively drained

*Parent material:* Thin layer of loamy alluvium underlain by stratified sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.3 inches

*Content of organic matter in the upper 10 inches:* 0.9 percent

*Typical profile:*

A—0 to 3 inches; sandy loam

Bw1—3 to 15 inches; sandy loam

2Bw2—15 to 31 inches; loamy sand

2Bw3—31 to 36 inches; gravelly loamy sand

2C—36 to 60 inches; stratified sand to very gravelly coarse sand

### *Minor Dissimilar Components*

#### **Graycalm soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Grettum soils**

*Extent:* 0 to 5 percent of the mapped areas

#### **Haugen soils**

*Extent:* 0 to 5 percent of the mapped areas

### 368C—Mahtomedi-Cress complex, 6 to 12 percent slopes

#### *Component Description*

##### **Mahtomedi and similar soils**

*Extent:* 20 to 80 percent of the mapped areas

*Geomorphic setting:* Stream terraces; outwash plains

*Position on the landform:* Shoulders and backslopes

*Slope range:* 6 to 12 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Excessively drained

*Parent material:* Sandy outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 2.7 inches

*Content of organic matter in the upper 10 inches:* 0.5 percent

*Typical profile:*

A—0 to 5 inches; loamy sand

E—5 to 8 inches; sand

Bw1—8 to 15 inches; gravelly coarse sand

Bw2—15 to 30 inches; gravelly sand

C—30 to 60 inches; gravelly sand

##### **Cress and similar soils**

*Extent:* 15 to 60 percent of the mapped areas

*Geomorphic setting:* Stream terraces; outwash plains

*Position on the landform:* Shoulders and backslopes

*Slope range:* 6 to 12 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Somewhat excessively drained

*Parent material:* Thin layer of loamy alluvium underlain by stratified sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.3 inches

*Content of organic matter in the upper 10 inches:* 0.9 percent

*Typical profile:*

A—0 to 3 inches; sandy loam

Bw1—3 to 15 inches; sandy loam

2Bw2—15 to 31 inches; loamy sand

2Bw3—31 to 36 inches; gravelly loamy sand

2C—36 to 60 inches; stratified sand to very gravelly coarse sand

#### *Minor Dissimilar Components*

##### **Graycalm soils**

*Extent:* 0 to 10 percent of the mapped areas

##### **Haugen soils**

*Extent:* 0 to 10 percent of the mapped areas

##### **Grettum soils**

*Extent:* 0 to 5 percent of the mapped areas

## 368D—Mahtomedi-Cress complex, 12 to 25 percent slopes

### *Component Description*

#### **Mahtomedi and similar soils**

*Extent:* 20 to 75 percent of the mapped areas

*Geomorphic setting:* Stream terraces; outwash plains

*Position on the landform:* Shoulders and backslopes

*Slope range:* 12 to 25 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Excessively drained

*Parent material:* Sandy outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 2.7 inches

*Content of organic matter in the upper 10 inches:* 0.5 percent

*Typical profile:*

A—0 to 5 inches; loamy sand

E—5 to 8 inches; sand

Bw1—8 to 15 inches; gravelly coarse sand

Bw2—15 to 30 inches; gravelly sand

C—30 to 60 inches; gravelly sand

#### **Cress and similar soils**

*Extent:* 20 to 75 percent of the mapped areas

*Geomorphic setting:* Stream terraces; outwash plains

*Position on the landform:* Shoulders and backslopes

*Slope range:* 12 to 25 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Somewhat excessively drained

*Parent material:* Thin layer of loamy alluvium underlain by stratified sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.3 inches

*Content of organic matter in the upper 10 inches:* 0.9 percent

*Typical profile:*

A—0 to 3 inches; sandy loam

Bw1—3 to 15 inches; sandy loam

2Bw2—15 to 31 inches; loamy sand

2Bw3—31 to 36 inches; gravelly loamy sand

2C—36 to 60 inches; stratified sand to very gravelly coarse sand

### *Minor Dissimilar Components*

#### **Graycalm soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Rosholt soils**

*Extent:* 0 to 10 percent of the mapped areas

### **371A—Croswell loamy sand, 0 to 3 percent slopes**

#### ***Component Description***

##### **Croswell and similar soils**

*Extent:* 80 to 100 percent of the mapped areas

*Geomorphic setting:* Lake terraces; lake plains; outwash plains; stream terraces

*Position on the landform:* Footslopes

*Slope range:* 0 to 3 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Moderately well drained

*Parent material:* Sandy outwash

*Flooding:* None

*Shallowest depth to wet zone:* 2.0 feet (April)

*Deepest depth to wet zone:* 5.0 feet (February, August)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.2 inches

*Content of organic matter in the upper 10 inches:* 1.2 percent

*Typical profile:*

A—0 to 1 inch; loamy sand

E—1 to 7 inches; loamy sand

Bs—7 to 16 inches; loamy sand

BC—16 to 39 inches; sand

C—39 to 60 inches; sand

#### ***Minor Dissimilar Components***

##### **Au Gres soils**

*Extent:* 0 to 10 percent of the mapped areas

##### **Vilas soils**

*Extent:* 0 to 10 percent of the mapped areas

##### **Sayner soils**

*Extent:* 0 to 5 percent of the mapped areas

### **380B—Cress-Rosholt complex, 2 to 6 percent slopes**

#### ***Component Description***

##### **Cress and similar soils**

*Extent:* 35 to 75 percent of the mapped areas

*Geomorphic setting:* Outwash plains; stream terraces

*Position on the landform:* Summits

*Slope range:* 2 to 6 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Somewhat excessively drained

*Parent material:* Thin layer of loamy alluvium underlain by stratified sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.3 inches

*Content of organic matter in the upper 10 inches:* 0.9 percent



*Typical profile:*

A—0 to 3 inches; sandy loam  
 Bw1—3 to 15 inches; sandy loam  
 2Bw2—15 to 31 inches; loamy sand  
 2Bw3—31 to 36 inches; gravelly loamy sand  
 2C—36 to 60 inches; stratified sand to very gravelly coarse sand

**Rosholt and similar soils**

*Extent:* 25 to 65 percent of the mapped areas  
*Geomorphic setting:* Outwash plains; stream terraces  
*Position on the landform:* Summits  
*Slope range:* 2 to 6 percent  
*Depth to restrictive layer(s):* More than 80 inches  
*Drainage class:* Well drained  
*Parent material:* Loamy alluvium underlain by stratified sandy and gravelly outwash  
*Flooding:* None  
*Depth to wet zone:* More than 6.7 feet all year  
*Ponding:* None  
*Available water capacity to a depth of 60 inches:* 4.7 inches  
*Content of organic matter in the upper 10 inches:* 1.7 percent  
*Typical profile:*

Ap—0 to 8 inches; sandy loam  
 E—8 to 10 inches; sandy loam  
 B/E—10 to 14 inches; sandy loam  
 Bt—14 to 28 inches; sandy loam  
 2Bt—28 to 34 inches; gravelly loamy sand  
 2C—34 to 60 inches; stratified sand to very gravelly coarse sand

***Minor Dissimilar Components*****Scott Lake soils**

*Extent:* 0 to 15 percent of the mapped areas

**Mahtomedi soils**

*Extent:* 0 to 5 percent of the mapped areas

**Aftad soils**

*Extent:* 0 to 5 percent of the mapped areas

**380C—Cress-Rosholt complex, 6 to 12 percent slopes*****Component Description*****Cress and similar soils**

*Extent:* 35 to 75 percent of the mapped areas  
*Geomorphic setting:* Outwash plains; stream terraces  
*Position on the landform:* Backslopes and shoulders  
*Slope range:* 6 to 12 percent  
*Depth to restrictive layer(s):* More than 80 inches  
*Drainage class:* Somewhat excessively drained  
*Parent material:* Thin layer of loamy alluvium underlain by stratified sandy and gravelly outwash  
*Flooding:* None  
*Depth to wet zone:* More than 6.7 feet all year  
*Ponding:* None  
*Available water capacity to a depth of 60 inches:* 4.3 inches  
*Content of organic matter in the upper 10 inches:* 0.9 percent

*Typical profile:*

- A—0 to 3 inches; sandy loam
- Bw1—3 to 15 inches; sandy loam
- 2Bw2—15 to 31 inches; loamy sand
- 2Bw3—31 to 36 inches; gravelly loamy sand
- 2C—36 to 60 inches; stratified sand to very gravelly coarse sand

**Rosholt and similar soils**

- Extent:* 20 to 60 percent of the mapped areas
- Geomorphic setting:* Outwash plains; stream terraces
- Position on the landform:* Shoulders and backslopes
- Slope range:* 6 to 12 percent
- Depth to restrictive layer(s):* More than 80 inches
- Drainage class:* Well drained
- Parent material:* Loamy alluvium underlain by stratified sandy and gravelly outwash
- Flooding:* None
- Depth to wet zone:* More than 6.7 feet all year
- Ponding:* None
- Available water capacity to a depth of 60 inches:* 4.7 inches
- Content of organic matter in the upper 10 inches:* 1.7 percent

*Typical profile:*

- Ap—0 to 8 inches; sandy loam
- E—8 to 10 inches; sandy loam
- B/E—10 to 14 inches; sandy loam
- Bt—14 to 28 inches; sandy loam
- 2Bt—28 to 34 inches; gravelly loamy sand
- 2C—34 to 60 inches; stratified sand to very gravelly coarse sand

***Minor Dissimilar Components*****Chetek soils**

- Extent:* 0 to 15 percent of the mapped areas

**Aftad soils**

- Extent:* 0 to 15 percent of the mapped areas

**Mahtomedi soils**

- Extent:* 0 to 10 percent of the mapped areas

**380D—Cress-Rosholt complex, 12 to 25 percent slopes*****Component Description*****Cress and similar soils**

- Extent:* 35 to 75 percent of the mapped areas
- Geomorphic setting:* Outwash plains; stream terraces
- Position on the landform:* Shoulders and backslopes
- Slope range:* 12 to 25 percent
- Depth to restrictive layer(s):* More than 80 inches
- Drainage class:* Somewhat excessively drained
- Parent material:* Thin layer of loamy alluvium underlain by stratified sandy and gravelly outwash
- Flooding:* None
- Depth to wet zone:* More than 6.7 feet all year
- Ponding:* None
- Available water capacity to a depth of 60 inches:* 4.3 inches
- Content of organic matter in the upper 10 inches:* 0.9 percent

*Typical profile:*

- A—0 to 3 inches; sandy loam
- Bw1—3 to 15 inches; sandy loam
- 2Bw2—15 to 31 inches; loamy sand
- 2Bw3—31 to 36 inches; gravelly loamy sand
- 2C—36 to 60 inches; stratified sand to very gravelly coarse sand

**Rosholt and similar soils**

- Extent:* 20 to 60 percent of the mapped areas
- Geomorphic setting:* Outwash plains; stream terraces
- Position on the landform:* Shoulders and backslopes
- Slope range:* 12 to 25 percent
- Depth to restrictive layer(s):* More than 80 inches
- Drainage class:* Well drained
- Parent material:* Loamy alluvium underlain by stratified sandy and gravelly outwash
- Flooding:* None
- Depth to wet zone:* More than 6.7 feet all year
- Ponding:* None
- Available water capacity to a depth of 60 inches:* 4.7 inches
- Content of organic matter in the upper 10 inches:* 1.7 percent

*Typical profile:*

- Ap—0 to 8 inches; sandy loam
- E—8 to 10 inches; sandy loam
- B/E—10 to 14 inches; sandy loam
- Bt—14 to 28 inches; sandy loam
- 2Bt—28 to 34 inches; gravelly loamy sand
- 2C—34 to 60 inches; stratified sand to very gravelly coarse sand

***Minor Dissimilar Components*****Chetek soils**

- Extent:* 0 to 15 percent of the mapped areas

**Antigo soils**

- Extent:* 0 to 10 percent of the mapped areas

**Mahtomedi soils**

- Extent:* 0 to 10 percent of the mapped areas

**383B—Mahtomedi loamy sand, 0 to 6 percent slopes*****Component Description*****Mahtomedi and similar soils**

- Extent:* 55 to 100 percent of the mapped areas
- Geomorphic setting:* Stream terraces; outwash plains
- Position on the landform:* Summits
- Slope range:* 0 to 6 percent
- Depth to restrictive layer(s):* More than 80 inches
- Drainage class:* Excessively drained
- Parent material:* Sandy outwash
- Flooding:* None
- Depth to wet zone:* More than 6.7 feet all year
- Ponding:* None
- Available water capacity to a depth of 60 inches:* 2.7 inches
- Content of organic matter in the upper 10 inches:* 0.5 percent

*Typical profile:*

- A—0 to 5 inches; loamy sand
- E—5 to 8 inches; sand
- Bw1—8 to 15 inches; gravelly coarse sand
- Bw2—15 to 30 inches; gravelly sand
- C—30 to 60 inches; gravelly sand

***Minor Dissimilar Components*****Menahga soils**

*Extent:* 0 to 30 percent of the mapped areas

**Graycalm soils**

*Extent:* 0 to 15 percent of the mapped areas

**Cress soils**

*Extent:* 0 to 5 percent of the mapped areas

**Lenroot soils**

*Extent:* 0 to 5 percent of the mapped areas

**383C—Mahtomedi loamy sand, 6 to 12 percent slopes*****Component Description*****Mahtomedi and similar soils**

*Extent:* 55 to 100 percent of the mapped areas

*Geomorphic setting:* Stream terraces; outwash plains

*Position on the landform:* Shoulders and backslopes

*Slope range:* 6 to 12 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Excessively drained

*Parent material:* Sandy outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 2.7 inches

*Content of organic matter in the upper 10 inches:* 0.5 percent

*Typical profile:*

- A—0 to 5 inches; loamy sand
- E—5 to 8 inches; sand
- Bw1—8 to 15 inches; gravelly coarse sand
- Bw2—15 to 30 inches; gravelly sand
- C—30 to 60 inches; gravelly sand

***Minor Dissimilar Components*****Menahga soils**

*Extent:* 0 to 30 percent of the mapped areas

**Graycalm soils**

*Extent:* 0 to 15 percent of the mapped areas

**Cress soils**

*Extent:* 0 to 5 percent of the mapped areas

**Lenroot soils**

*Extent:* 0 to 5 percent of the mapped areas

### 383D—Mahtomedi loamy sand, 12 to 30 percent slopes

#### *Component Description*

##### **Mahtomedi and similar soils**

*Extent:* 55 to 100 percent of the mapped areas

*Geomorphic setting:* Stream terraces; outwash plains

*Position on the landform:* Shoulders and backslopes

*Slope range:* 12 to 30 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Excessively drained

*Parent material:* Sandy outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 2.7 inches

*Content of organic matter in the upper 10 inches:* 0.5 percent

*Typical profile:*

A—0 to 5 inches; loamy sand

E—5 to 8 inches; sand

Bw1—8 to 15 inches; gravelly coarse sand

Bw2—15 to 30 inches; gravelly sand

C—30 to 60 inches; gravelly sand

#### *Minor Dissimilar Components*

##### **Menahga soils**

*Extent:* 0 to 30 percent of the mapped areas

##### **Graycalm soils**

*Extent:* 0 to 10 percent of the mapped areas

##### **Cress soils**

*Extent:* 0 to 5 percent of the mapped areas

##### **Fremstadt soils**

*Extent:* 0 to 5 percent of the mapped areas

### 396B—Friendship-Wurtsmith-Grayling complex, 0 to 6 percent slopes

#### *Component Description*

##### **Friendship and similar soils**

*Extent:* 20 to 60 percent of the mapped areas

*Geomorphic setting:* Outwash plains

*Position on the landform:* Footslopes

*Slope range:* 0 to 3 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Moderately well drained

*Parent material:* Sandy eolian deposits

*Flooding:* None

*Shallowest depth to wet zone:* 4.5 feet (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, June, July, August, September, October, November, December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 3.6 inches

*Content of organic matter in the upper 10 inches:* 0.7 percent

*Typical profile:*

A—0 to 4 inches; sand

Bw—4 to 29 inches; sand

C—29 to 60 inches; sand

#### **Wurtsmith and similar soils**

*Extent:* 20 to 55 percent of the mapped areas

*Geomorphic setting:* Outwash plains

*Position on the landform:* Footslopes

*Slope range:* 0 to 3 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Moderately well drained

*Parent material:* Sandy eolian deposits

*Flooding:* None

*Shallowest depth to wet zone:* 2.0 feet (April)

*Deepest depth to wet zone:* 5.0 feet (February, August)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 3.7 inches

*Content of organic matter in the upper 10 inches:* 2.2 percent

*Typical profile:*

A—0 to 6 inches; sand

Bw—6 to 33 inches; sand

C—33 to 60 inches; sand

#### **Grayling and similar soils**

*Extent:* 15 to 35 percent of the mapped areas

*Geomorphic setting:* Outwash plains

*Position on the landform:* Summits

*Slope range:* 1 to 6 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Excessively drained

*Parent material:* Sandy eolian deposits

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 2.8 inches

*Content of organic matter in the upper 10 inches:* 1.4 percent

*Typical profile:*

A—0 to 3 inches; sand

Bw—3 to 15 inches; sand

BC—15 to 23 inches; sand

C—23 to 60 inches; sand

### ***Minor Dissimilar Components***

#### **Meehan soils**

*Extent:* 0 to 5 percent of the mapped areas

## **397A—Perchlake loamy fine sand, 0 to 2 percent slopes**

### ***Component Description***

#### **Perchlake and similar soils**

*Extent:* 65 to 100 percent of the mapped areas

*Geomorphic setting:* Lake plains; outwash plains

*Position on the landform:* Footslopes  
*Slope range:* 0 to 2 percent  
*Depth to restrictive layer(s):* More than 80 inches  
*Drainage class:* Somewhat poorly drained  
*Parent material:* Sandy outwash or sandy lacustrine deposits  
*Flooding:* None  
*Shallowest depth to wet zone:* 0.5 foot (April)  
*Deepest depth to wet zone:* 4.0 feet (February, August)  
*Ponding:* None  
*Available water capacity to a depth of 60 inches:* 4.9 inches  
*Content of organic matter in the upper 10 inches:* 1.2 percent  
*Typical profile:*  
     Ap—0 to 9 inches; loamy fine sand  
     Bw—9 to 18 inches; fine sand  
     E&Bt—18 to 42 inches; sand, loamy sand  
     2Btg—42 to 46 inches; fine sandy loam  
     3C—46 to 60 inches; sand

### ***Minor Dissimilar Components***

#### **Lino soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Meenon soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Newson soils**

*Extent:* 0 to 10 percent of the mapped areas

## **399B—Grayling sand, 0 to 6 percent slopes**

### ***Component Description***

#### **Grayling and similar soils**

*Extent:* 85 to 100 percent of the mapped areas  
*Geomorphic setting:* Outwash plains  
*Position on the landform:* Summits  
*Slope range:* 0 to 6 percent  
*Depth to restrictive layer(s):* More than 80 inches  
*Drainage class:* Excessively drained  
*Parent material:* Sandy eolian deposits  
*Flooding:* None  
*Depth to wet zone:* More than 6.7 feet all year  
*Ponding:* None  
*Available water capacity to a depth of 60 inches:* 2.8 inches  
*Content of organic matter in the upper 10 inches:* 1.4 percent  
*Typical profile:*  
     A—0 to 3 inches; sand  
     Bw—3 to 15 inches; sand  
     BC—15 to 23 inches; sand  
     C—23 to 60 inches; sand

### ***Minor Dissimilar Components***

#### **Friendship soils**

*Extent:* 0 to 10 percent of the mapped areas



**Wurtsmith soils**

*Extent:* 0 to 5 percent of the mapped areas

**399C—Grayling sand, 6 to 12 percent slopes*****Component Description*****Grayling and similar soils**

*Extent:* 93 to 100 percent of the mapped areas

*Geomorphic setting:* Outwash plains

*Position on the landform:* Shoulders and backslopes

*Slope range:* 6 to 12 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Excessively drained

*Parent material:* Sandy eolian deposits

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 2.8 inches

*Content of organic matter in the upper 10 inches:* 1.4 percent

*Typical profile:*

A—0 to 3 inches; sand

Bw—3 to 15 inches; sand

BC—15 to 23 inches; sand

C—23 to 60 inches; sand

***Minor Dissimilar Components*****Friendship similar soils**

*Extent:* 0 to 5 percent of the mapped areas

**Wurtsmith soils**

*Extent:* 0 to 2 percent of the mapped areas

**399D—Grayling sand, 12 to 30 percent slopes*****Component Description*****Grayling and similar soils**

*Extent:* 93 to 100 percent of the mapped areas

*Geomorphic setting:* Outwash plains

*Position on the landform:* Backslopes and shoulders

*Slope range:* 12 to 30 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Excessively drained

*Parent material:* Sandy eolian deposits

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 2.8 inches

*Content of organic matter in the upper 10 inches:* 1.4 percent

*Typical profile:*

A—0 to 3 inches; sand

Bw—3 to 15 inches; sand

BC—15 to 23 inches; sand

C—23 to 60 inches; sand

### ***Minor Dissimilar Components***

#### **Friendship soils**

*Extent:* 0 to 5 percent of the mapped areas

#### **Wurtsmith soils**

*Extent:* 0 to 2 percent of the mapped areas

### **405A—Lupton, Cathro, and Tawas soils, 0 to 1 percent slopes**

#### ***Component Description***

##### **Lupton and similar soils**

*Extent:* 0 to 100 percent of the mapped areas

*Geomorphic setting:* Depressions on disintegration moraines

*Slope range:* 0 to 1 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Very poorly drained

*Parent material:* Herbaceous and woody organic material more than 51 inches thick

*Flooding:* None

*Wet zone:* At the surface all year

*Months in which ponding does not occur:* January, February, July, August, September, October, December

*Deepest ponding:* 0.5 foot (March, April, May, June, November)

*Available water capacity to a depth of 60 inches:* 23.9 inches

*Content of organic matter in the upper 10 inches:* 80.0 percent

*Typical profile:*

Oa—0 to 65 inches; muck

##### **Cathro and similar soils**

*Extent:* 0 to 100 percent of the mapped areas

*Geomorphic setting:* Depressions on disintegration moraines

*Slope range:* 0 to 1 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Very poorly drained

*Parent material:* Herbaceous organic material 16 to 51 inches thick underlain by loamy deposits

*Flooding:* None

*Wet zone:* At the surface all year

*Months in which ponding does not occur:* January, February, July, August, September, October, December

*Deepest ponding:* 0.5 foot (March, April, May, June, November)

*Available water capacity to a depth of 60 inches:* 16.6 inches

*Content of organic matter in the upper 10 inches:* 72.5 percent

*Typical profile:*

Oa—0 to 28 inches; muck

Cg1—28 to 49 inches; loam

Cg2—49 to 60 inches; sandy loam

##### **Tawas and similar soils**

*Extent:* 0 to 100 percent of the mapped areas

*Geomorphic setting:* Depressions on disintegration moraines

*Slope range:* 0 to 1 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Very poorly drained

*Parent material:* Herbaceous organic material 16 to 51 inches thick over sandy deposits

*Flooding:* None

*Wet zone:* At the surface all year

*Months in which ponding does not occur:* January, February, July, August, September, October, December

*Deepest ponding:* 0.5 foot (March, April, May, June)

*Available water capacity to a depth of 60 inches:* 14.2 inches

*Content of organic matter in the upper 10 inches:* 55.0 percent

*Typical profile:*

Oa—0 to 31 inches; muck

Cg—31 to 60 inches; fine sand

## **406A—Loxley mucky peat, 0 to 1 percent slopes**

### ***Component Description***

#### **Loxley and similar soils**

*Extent:* 70 to 100 percent of the mapped areas

*Geomorphic setting:* Depressions on lake plains and outwash plains

*Slope range:* 0 to 1 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Very poorly drained

*Parent material:* Herbaceous organic material more than 51 inches thick

*Flooding:* None

*Shallowest depth to wet zone:* At the surface (April, May, June, October, November)

*Deepest depth to wet zone:* 1.0 foot (January, February)

*Months in which ponding does not occur:* January, February, March, May, June, July, August, September, October, November, December

*Deepest ponding:* 0.5 foot (April)

*Available water capacity to a depth of 60 inches:* 25.2 inches

*Content of organic matter in the upper 10 inches:* 80.0 percent

*Typical profile:*

Oe—0 to 13 inches; mucky peat

Oa—13 to 60 inches; muck

### ***Minor Dissimilar Components***

#### **Seelyeville soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Uskabwanka soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Newson soils**

*Extent:* 0 to 5 percent of the mapped areas

## **407A—Seelyeville and Markey soils, 0 to 1 percent slopes**

### ***Component Description***

#### **Seelyeville and similar soils**

*Extent:* 0 to 100 percent of the mapped areas

*Geomorphic setting:* Depressions on lake plains and outwash plains; drainageways on outwash plains

*Slope range:* 0 to 1 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Very poorly drained

*Parent material:* Herbaceous organic material more than 51 inches thick

*Flooding:* None

*Wet zone:* At the surface all year

*Months in which ponding does not occur:* January, February, July, August, September, October, December

*Deepest ponding:* 0.5 foot (March, April, May, June, November)

*Available water capacity to a depth of 60 inches:* 23.9 inches

*Content of organic matter in the upper 10 inches:* 62.0 percent

*Typical profile:*

Oa—0 to 80 inches; muck

#### **Markey and similar soils**

*Extent:* 0 to 100 percent of the mapped areas

*Geomorphic setting:* Depressions on lake plains and outwash plains; drainageways on outwash plains

*Slope range:* 0 to 1 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Very poorly drained

*Parent material:* Herbaceous organic material 16 to 51 inches thick overlying sandy deposits

*Flooding:* None

*Wet zone:* At the surface all year

*Months in which ponding does not occur:* January, February, July, August, September, October, December

*Deepest ponding:* 0.5 foot (March, April, May, June, November)

*Available water capacity to a depth of 60 inches:* 14.4 inches

*Content of organic matter in the upper 10 inches:* 70.0 percent

*Typical profile:*

Oa—0 to 32 inches; muck

Cg—32 to 60 inches; sand

### ***Minor Dissimilar Components***

#### **Newson soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Dawson soils**

*Extent:* 0 to 10 percent of the mapped areas

## **410A—Seelyeville and Cathro soils, 0 to 1 percent slopes**

### ***Component Description***

#### **Seelyeville and similar soils**

*Extent:* 0 to 100 percent of the mapped areas

*Geomorphic setting:* Depressions on lake plains and outwash plains; drainageways on outwash plains

*Slope range:* 0 to 1 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Very poorly drained

*Parent material:* Herbaceous organic material more than 51 inches thick

*Flooding:* None

*Wet zone:* At the surface all year

*Months in which ponding does not occur:* January, February, July, August, September, October, December

*Deepest ponding:* 0.5 foot (March, April, May, June, November)

*Available water capacity to a depth of 60 inches:* 23.9 inches

*Content of organic matter in the upper 10 inches:* 62.0 percent

*Typical profile:*

Oa—0 to 80 inches; muck

#### **Cathro and similar soils**

*Extent:* 0 to 100 percent of the mapped areas

*Geomorphic setting:* Depressions and drainageways on disintegration moraines

*Slope range:* 0 to 1 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Very poorly drained

*Parent material:* Herbaceous organic material 16 to 51 inches thick over loamy or silty deposits

*Flooding:* None

*Wet zone:* At the surface all year

*Months in which ponding does not occur:* January, February, July, August, September, October, December

*Deepest ponding:* 0.5 foot (March, April, May, June, November)

*Available water capacity to a depth of 60 inches:* 16.6 inches

*Content of organic matter in the upper 10 inches:* 72.5 percent

*Typical profile:*

Oa—0 to 28 inches; muck

Cg1—28 to 49 inches; loam

Cg2—49 to 60 inches; sandy loam

### ***Minor Dissimilar Components***

#### **Greenwood soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Capitola soils**

*Extent:* 0 to 5 percent of the mapped areas

#### **Minocqua soils**

*Extent:* 0 to 5 percent of the mapped areas

## **412A—Rifle and Tacoosh soils, 0 to 1 percent slopes**

### ***Component Description***

#### **Rifle and similar soils**

*Extent:* 0 to 100 percent of the mapped areas

*Geomorphic setting:* Depressions and drainageways on outwash plains

*Slope range:* 0 to 1 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Very poorly drained

*Parent material:* Organic deposits more than 51 inches thick

*Flooding:* None

*Wet zone:* At the surface all year

*Months in which ponding does not occur:* January, February, July, August, September, October, December

*Deepest ponding:* 0.5 foot (March, April, May, June, November)

*Available water capacity to a depth of 60 inches:* 30.3 inches

*Content of organic matter in the upper 10 inches:* 80.0 percent

*Typical profile:*

Oi—0 to 4 inches; peat

Oe—4 to 60 inches; mucky peat

#### **Tacoosh and similar soils**

*Extent:* 0 to 100 percent of the mapped areas

*Geomorphic setting:* Depressions and drainageways on outwash plains

*Slope range:* 0 to 1 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Very poorly drained

*Parent material:* Herbaceous organic material 16 to 51 inches thick over loamy or silty deposits

*Flooding:* None

*Wet zone:* At the surface all year

*Months in which ponding does not occur:* January, February, July, August, September, October, December

*Deepest ponding:* 0.5 foot (March, April, May, June, November)

*Available water capacity to a depth of 60 inches:* 22.2 inches

*Content of organic matter in the upper 10 inches:* 87.0 percent

*Typical profile:*

Oa—0 to 8 inches; muck

Oe—8 to 40 inches; mucky peat

Cg1—40 to 42 inches; very fine sandy loam

Cg2—42 to 60 inches; sandy loam

### ***Minor Dissimilar Components***

#### **Greenwood soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Rib soils**

*Extent:* 0 to 5 percent of the mapped areas

## **415A—Greenwood mucky peat, 0 to 1 percent slopes**

### ***Component Description***

#### **Greenwood and similar soils**

*Extent:* 80 to 100 percent of the mapped areas

*Geomorphic setting:* Depressions and drainageways on outwash plains

*Slope range:* 0 to 1 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Very poorly drained

*Parent material:* Organic deposits more than 51 inches thick

*Flooding:* None

*Shallowest depth to wet zone:* At the surface (April, May, June, October, November)

*Deepest depth to wet zone:* 1.0 foot (January, February)

*Months in which ponding does not occur:* January, February, March, May, June, July, August, September, October, November, December

*Deepest ponding:* 0.5 foot (April)

*Available water capacity to a depth of 60 inches:* 23.9 inches

*Content of organic matter in the upper 10 inches:* 80.0 percent

*Typical profile:*

Oe—0 to 60 inches; mucky peat

***Minor Dissimilar Components*****Beseman soils**

*Extent:* 0 to 10 percent of the mapped areas

**Capitola soils**

*Extent:* 0 to 10 percent of the mapped areas

**439B—Graycalm-Menahga complex, 0 to 6 percent slopes*****Component Description*****Graycalm and similar soils**

*Extent:* 40 to 80 percent of the mapped areas

*Geomorphic setting:* Outwash plains

*Position on the landform:* Summits

*Slope range:* 0 to 6 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Somewhat excessively drained

*Parent material:* Sandy outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.9 inches

*Content of organic matter in the upper 10 inches:* 0.6 percent

*Typical profile:*

A—0 to 3 inches; loamy sand

Bw—3 to 22 inches; sand

E—22 to 35 inches; sand

E&Bt—35 to 60 inches; stratified sand to loamy sand

**Menahga and similar soils**

*Extent:* 20 to 60 percent of the mapped areas

*Geomorphic setting:* Outwash plains

*Position on the landform:* Summits

*Slope range:* 0 to 6 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Excessively drained

*Parent material:* Sandy outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 3.8 inches

*Content of organic matter in the upper 10 inches:* 0.3 percent

*Typical profile:*

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 2 inches; loamy sand

Bw—2 to 25 inches; sand

C—25 to 80 inches; sand

***Minor Dissimilar Components*****Mahtomedi soils**

*Extent:* 0 to 10 percent of the mapped areas

**Cress soils**

*Extent:* 0 to 8 percent of the mapped areas



**Grettum soils***Extent:* 0 to 5 percent of the mapped areas**Wurtsmith soils***Extent:* 0 to 5 percent of the mapped areas**439C—Graycalm-Menahga complex, 6 to 12 percent slopes*****Component Description*****Graycalm and similar soils***Extent:* 40 to 80 percent of the mapped areas*Geomorphic setting:* Outwash plains*Position on the landform:* Shoulders and backslopes*Slope range:* 6 to 12 percent*Depth to restrictive layer(s):* More than 80 inches*Drainage class:* Somewhat excessively drained*Parent material:* Sandy outwash*Flooding:* None*Depth to wet zone:* More than 6.7 feet all year*Ponding:* None*Available water capacity to a depth of 60 inches:* 4.9 inches*Content of organic matter in the upper 10 inches:* 0.6 percent*Typical profile:*

A—0 to 3 inches; loamy sand

Bw—3 to 22 inches; sand

E—22 to 35 inches; sand

E&amp;Bt—35 to 60 inches; stratified sand to loamy sand

**Menahga and similar soils***Extent:* 20 to 60 percent of the mapped areas*Geomorphic setting:* Outwash plains*Position on the landform:* Shoulders and backslopes*Slope range:* 6 to 12 percent*Depth to restrictive layer(s):* More than 80 inches*Drainage class:* Excessively drained*Parent material:* Sandy outwash*Flooding:* None*Depth to wet zone:* More than 6.7 feet all year*Ponding:* None*Available water capacity to a depth of 60 inches:* 3.8 inches*Content of organic matter in the upper 10 inches:* 0.3 percent*Typical profile:*

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 2 inches; loamy sand

B—2 to 25 inches; sand

C—25 to 80 inches; sand

***Minor Dissimilar Components*****Mahtomedi soils***Extent:* 0 to 10 percent of the mapped areas

**Grettum soils**

*Extent:* 0 to 10 percent of the mapped areas

**Cress soils**

*Extent:* 0 to 5 percent of the mapped areas

**439D—Graycalm-Menahga complex, 12 to 30 percent slopes*****Component Description*****Graycalm and similar soils**

*Extent:* 40 to 80 percent of the mapped areas

*Geomorphic setting:* Outwash plains

*Position on the landform:* Shoulders and backslopes

*Slope range:* 12 to 30 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Somewhat excessively drained

*Parent material:* Sandy outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.9 inches

*Content of organic matter in the upper 10 inches:* 0.6 percent

*Typical profile:*

A—0 to 3 inches; loamy sand

Bw—3 to 22 inches; sand

E—22 to 35 inches; sand

E&Bt—35 to 60 inches; stratified sand to loamy sand

**Menahga and similar soils**

*Extent:* 20 to 60 percent of the mapped areas

*Geomorphic setting:* Outwash plains

*Position on the landform:* Shoulders and backslopes

*Slope range:* 12 to 30 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Excessively drained

*Parent material:* Sandy outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 3.8 inches

*Content of organic matter in the upper 10 inches:* 0.3 percent

*Typical profile:*

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 2 inches; loamy sand

Bw—2 to 25 inches; sand

C—25 to 80 inches; sand

***Minor Dissimilar Components*****Mahtomedi soils**

*Extent:* 0 to 15 percent of the mapped areas

**Cress soils**

*Extent:* 0 to 5 percent of the mapped areas

## **441C—Freeon, very stony-Cathro complex, 0 to 15 percent slopes**

### ***Component Description***

**Freeon and similar soils**

*Extent:* 50 to 80 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Shoulders and backslopes

*Slope range:* 6 to 15 percent

*Depth to restrictive layer(s):* 40 to 60 inches to dense material

*Drainage class:* Moderately well drained

*Parent material:* Loess or silty alluvium underlain by dense loamy till

*Flooding:* None

*Shallowest depth to wet zone:* 1.0 foot (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, June, July, August, September)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 9.1 inches

*Content of organic matter in the upper 10 inches:* 1.1 percent

*Typical profile:*

A—0 to 4 inches; silt loam

E/B—4 to 19 inches; silt loam

2B/E—19 to 39 inches; sandy loam

2Bt—39 to 53 inches; sandy loam

2BCd—53 to 80 inches; sandy loam

**Cathro and similar soils**

*Extent:* 10 to 30 percent of the mapped areas

*Geomorphic setting:* Depressions on disintegration moraines

*Slope range:* 0 to 2 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Very poorly drained

*Parent material:* Herbaceous organic material underlain by loamy deposits

*Flooding:* None

*Wet zone:* At the surface all year

*Months in which ponding does not occur:* January, February, July, August, September, October, December

*Deepest ponding:* 0.5 foot (March, April, May, June, November)

*Available water capacity to a depth of 60 inches:* 16.6 inches

*Content of organic matter in the upper 10 inches:* 72.5 percent

*Typical profile:*

Oa—0 to 28 inches; muck

Cg1—28 to 49 inches; loam

Cg2—49 to 60 inches; sandy loam

### ***Minor Dissimilar Components***

**Amery soils**

*Extent:* 0 to 15 percent of the mapped areas

**Magnor soils***Extent:* 0 to 15 percent of the mapped areas**Capitola soils***Extent:* 0 to 10 percent of the mapped areas**Haugen soils***Extent:* 0 to 10 percent of the mapped areas**442C—Haugen, very stony-Greenwood complex, 0 to 15 percent slopes*****Component Description*****Haugen and similar soils***Extent:* 30 to 80 percent of the mapped areas*Geomorphic setting:* Disintegration moraines*Position on the landform:* Shoulders and backslopes*Slope range:* 2 to 15 percent*Depth to restrictive layer(s):* 60 to 80 inches to dense material*Drainage class:* Moderately well drained*Parent material:* Sandy loam till or mudflow sediments*Flooding:* None*Shallowest depth to wet zone:* 2.0 feet (March, April)*Deepest depth to wet zone:* More than 6.7 feet (January, February, July, August, September, October)*Ponding:* None*Available water capacity to a depth of 60 inches:* 6.5 inches*Content of organic matter in the upper 10 inches:* 1.2 percent*Typical profile:*

A—0 to 4 inches; sandy loam

Bw1—4 to 15 inches; sandy loam

Bw2—15 to 23 inches; gravelly sandy loam

E/B—23 to 35 inches; gravelly sandy loam

B/E—35 to 49 inches; sandy loam

Bt—49 to 79 inches; gravelly sandy loam

Cd—79 to 80 inches; gravelly sandy loam

**Greenwood and similar soils***Extent:* 15 to 35 percent of the mapped areas*Geomorphic setting:* Depressions on disintegration moraines*Slope range:* 0 to 2 percent*Depth to restrictive layer(s):* More than 80 inches*Drainage class:* Very poorly drained*Parent material:* Organic deposits more than 51 inches thick*Flooding:* None*Shallowest depth to wet zone:* At the surface (April, May, June, October, November)*Deepest depth to wet zone:* 1.0 foot (January, February)*Months in which ponding does not occur:* January, February, March, May, June, July, August, September, October, November, December*Deepest ponding:* 0.5 foot (April)*Available water capacity to a depth of 60 inches:* 30.5 inches*Content of organic matter in the upper 10 inches:* 65.0 percent

*Typical profile:*

Oi—0 to 6 inches; peat

Oe—6 to 60 inches; mucky peat

***Minor Dissimilar Components*****Amery soils***Extent:* 0 to 15 percent of the mapped areas**Freeon soils***Extent:* 0 to 10 percent of the mapped areas**Capitola soils***Extent:* 0 to 6 percent of the mapped areas**Magnor soils***Extent:* 0 to 5 percent of the mapped areas**443D—Amery, very stony-Greenwood complex, 0 to 35 percent slopes*****Component Description*****Amery and similar soils***Extent:* 30 to 60 percent of the mapped areas*Geomorphic setting:* Disintegration moraines*Position on the landform:* Backslopes and shoulders*Slope range:* 15 to 35 percent*Depth to restrictive layer(s):* 60 to 80 inches to dense material*Drainage class:* Well drained*Parent material:* Sandy loam till or mudflow sediments*Flooding:* None*Depth to wet zone:* More than 6.7 feet all year*Ponding:* None*Available water capacity to a depth of 60 inches:* 7.2 inches*Content of organic matter in the upper 10 inches:* 0.8 percent*Typical profile:*

A—0 to 3 inches; sandy loam

Bw—3 to 22 inches; sandy loam

E/B—22 to 34 inches; sandy loam

B/E—34 to 41 inches; gravelly sandy loam

Bt1—41 to 57 inches; gravelly sandy loam

Bt2—57 to 71 inches; sandy loam

Cd—71 to 80 inches; sandy loam

**Greenwood and similar soils***Extent:* 15 to 40 percent of the mapped areas*Geomorphic setting:* Depressions on disintegration moraines*Slope range:* 0 to 2 percent*Depth to restrictive layer(s):* More than 80 inches*Drainage class:* Very poorly drained*Parent material:* Organic deposits more than 51 inches thick*Flooding:* None*Shallowest depth to wet zone:* At the surface (April, May, June, October, November)*Deepest depth to wet zone:* 1.0 foot (January, February)

*Months in which ponding does not occur:* January, February, March, May, June, July, August, September, October, November, December

*Deepest ponding:* 0.5 foot (April)

*Available water capacity to a depth of 60 inches:* 30.5 inches

*Content of organic matter in the upper 10 inches:* 65.0 percent

*Typical profile:*

Oi—0 to 6 inches; peat

Oe—6 to 60 inches; mucky peat

### ***Minor Dissimilar Components***

#### **Haugen soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Capitola soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Magnor soils**

*Extent:* 0 to 10 percent of the mapped areas

## **461A—Bowstring muck, 0 to 1 percent slopes, frequently flooded**

### ***Component Description***

#### **Bowstring and similar soils**

*Extent:* 75 to 100 percent of the mapped areas

*Geomorphic setting:* Flood plains

*Slope range:* 0 to 1 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Very poorly drained

*Parent material:* Highly decomposed organic material that is stratified with thin layers of sandy or loamy material

*Lowest frequency of flooding (if it occurs):* Rare (January, February, July, August, December)

*Highest frequency of flooding:* Frequent (April, May)

*Shallowest depth to wet zone:* At the surface (April, May, November)

*Deepest depth to wet zone:* 2.5 feet (February, August)

*Months in which ponding does not occur:* January, February, March, June, July, August, September, October, December

*Deepest ponding:* 0.5 foot (April, May, November)

*Available water capacity to a depth of 60 inches:* 21.1 inches

*Content of organic matter in the upper 10 inches:* 80.0 percent

*Typical profile:*

Oa—0 to 38 inches; muck

Cg—38 to 47 inches; fine sand

O'a—47 to 80 inches; muck

### ***Minor Dissimilar Components***

#### **Fordum soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Totagatic soils**

*Extent:* 0 to 10 percent of the mapped areas

## 484A—Greenwood and Beseman soils, 0 to 1 percent slopes

### *Component Description*

#### **Greenwood and similar soils**

*Extent:* 0 to 100 percent of the mapped areas

*Geomorphic setting:* Depressions and drainageways on disintegration moraines

*Slope range:* 0 to 1 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Very poorly drained

*Parent material:* Organic deposits more than 51 inches thick

*Flooding:* None

*Shallowest depth to wet zone:* At the surface (April, May, June, October, November)

*Deepest depth to wet zone:* 1.0 foot (January, February)

*Months in which ponding does not occur:* January, February, March, May, June, July, August, September, October, November, December

*Deepest ponding:* 0.5 foot (April)

*Available water capacity to a depth of 60 inches:* 30.5 inches

*Content of organic matter in the upper 10 inches:* 65.0 percent

*Typical profile:*

Oi—0 to 6 inches; peat

Oe—6 to 60 inches; mucky peat

#### **Beseman and similar soils**

*Extent:* 0 to 100 percent of the mapped areas

*Geomorphic setting:* Depressions and drainageways on disintegration moraines

*Slope range:* 0 to 1 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Very poorly drained

*Parent material:* Herbaceous organic material 16 to 51 inches thick over loamy till

*Flooding:* None

*Shallowest depth to wet zone:* At the surface (April, May, June, October, November)

*Deepest depth to wet zone:* 1.0 foot (January, February)

*Months in which ponding does not occur:* January, February, March, May, June, July, August, September, October, November, December

*Deepest ponding:* 0.5 foot (April)

*Available water capacity to a depth of 60 inches:* 18.2 inches

*Content of organic matter in the upper 10 inches:* 50.0 percent

*Typical profile:*

Oa—0 to 36 inches; muck

Cg—36 to 60 inches; silt loam

### *Minor Dissimilar Components*

#### **Seelyeville soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Capitola soils**

*Extent:* 0 to 5 percent of the mapped areas

#### **Minocqua soils**

*Extent:* 0 to 3 percent of the mapped areas



## **495B—Karlsborg-Grettum-Perida complex, 1 to 6 percent slopes**

### ***Component Description***

#### **Karlsborg and similar soils**

*Extent:* 30 to 60 percent of the mapped areas

*Geomorphic setting:* Outwash plains; lake plains

*Position on the landform:* Summits

*Slope range:* 1 to 6 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Moderately well drained

*Parent material:* Mantle of sandy outwash or sandy lacustrine deposits over clayey lacustrine deposits underlain by sandy outwash or sandy lacustrine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 1.5 feet (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, July, August, September, October, November, December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.7 inches

*Content of organic matter in the upper 10 inches:* 1.2 percent

*Typical profile:*

Ap—0 to 9 inches; loamy sand

Bw—9 to 28 inches; sand

2Bt—28 to 48 inches; clay

3C—48 to 80 inches; sand

#### **Grettum and similar soils**

*Extent:* 20 to 50 percent of the mapped areas

*Geomorphic setting:* Outwash plains; lake plains

*Position on the landform:* Summits

*Slope range:* 1 to 6 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Moderately well drained

*Parent material:* Sandy outwash or lacustrine deposits with lamellae

*Flooding:* None

*Shallowest depth to wet zone:* 4.5 feet (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, June, July, August, September, October, November, December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.3 inches

*Content of organic matter in the upper 10 inches:* 0.8 percent

*Typical profile:*

A—0 to 3 inches; loamy sand

Bw—3 to 32 inches; sand

E&Bt—32 to 75 inches; sand

C—75 to 80 inches; sand

#### **Perida and similar soils**

*Extent:* 15 to 40 percent of the mapped areas

*Geomorphic setting:* Outwash plains; lake plains

*Position on the landform:* Summits

*Slope range:* 1 to 6 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Moderately well drained

*Parent material:* Mantle of sandy outwash or sandy lacustrine deposits over clayey lacustrine deposits underlain by sandy outwash or sandy lacustrine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 3.5 feet (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, July, August, September, October, November, December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.8 inches

*Content of organic matter in the upper 10 inches:* 1.2 percent

*Typical profile:*

Ap—0 to 9 inches; loamy sand

Bw1,Bw2,Bw3—9 to 43 inches; sand

Bw4—43 to 45 inches; loamy sand

2Bt1—45 to 60 inches; clay

2Bt2—60 to 74 inches; silty clay

3C—74 to 80 inches; sand

### ***Minor Dissimilar Components***

#### **Graycalm soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Menahga soils**

*Extent:* 0 to 10 percent of the mapped areas

## **495C—Karlsborg-Grettum-Perida complex, 6 to 12 percent slopes**

### ***Component Description***

#### **Karlsborg and similar soils**

*Extent:* 25 to 60 percent of the mapped areas

*Geomorphic setting:* Outwash plains; lake plains

*Position on the landform:* Shoulders and backslopes

*Slope range:* 6 to 12 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Moderately well drained

*Parent material:* Mantle of sandy outwash or sandy lacustrine deposits over clayey lacustrine deposits underlain by sandy outwash or sandy lacustrine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 1.5 feet (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, July, August, September, October, November, December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.7 inches

*Content of organic matter in the upper 10 inches:* 1.2 percent

*Typical profile:*

Ap—0 to 9 inches; loamy sand

Bw—9 to 28 inches; sand

2Bt—28 to 48 inches; clay

3C—48 to 80 inches; sand

**Grettum and similar soils**

*Extent:* 20 to 50 percent of the mapped areas

*Geomorphic setting:* Outwash plains; lake plains

*Position on the landform:* Backslopes and shoulders

*Slope range:* 6 to 12 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Moderately well drained

*Parent material:* Sandy outwash or lacustrine deposits with lamellae

*Flooding:* None

*Shallowest depth to wet zone:* 4.5 feet (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, June, July, August, September, October, November, December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.3 inches

*Content of organic matter in the upper 10 inches:* 0.8 percent

*Typical profile:*

A—0 to 3 inches; loamy sand

Bw—3 to 32 inches; sand

E&Bt—32 to 75 inches; sand

C—75 to 80 inches; sand

**Perida and similar soils**

*Extent:* 15 to 40 percent of the mapped areas

*Geomorphic setting:* Outwash plains; lake plains

*Position on the landform:* Backslopes and shoulders

*Slope range:* 6 to 12 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Moderately well drained

*Parent material:* Mantle of sandy outwash or sandy lacustrine deposits over clayey lacustrine deposits underlain by sandy outwash or sandy lacustrine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 3.5 feet (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, July, August, September, October, November, December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.8 inches

*Content of organic matter in the upper 10 inches:* 1.2 percent

*Typical profile:*

Ap—0 to 9 inches; loamy sand

Bw1,Bw2,Bw3—9 to 43 inches; sand

Bw4—43 to 45 inches; loamy sand

2Bt1—45 to 60 inches; clay

2Bt2—60 to 74 inches; silty clay

3C—74 to 80 inches; sand

***Minor Dissimilar Components*****Graycalm soils**

*Extent:* 0 to 15 percent of the mapped areas

**Menahga soils**

*Extent:* 0 to 10 percent of the mapped areas

## **495D—Karlsborg-Grettum-Perida complex, 12 to 30 percent slopes**

### ***Component Description***

#### **Karlsborg and similar soils**

*Extent:* 30 to 50 percent of the mapped areas

*Geomorphic setting:* Outwash plains; lake plains

*Position on the landform:* Backslopes and shoulders

*Slope range:* 12 to 30 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Moderately well drained

*Parent material:* Mantle of sandy outwash or sandy lacustrine deposits over clayey lacustrine deposits underlain by sandy outwash or sandy lacustrine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 1.5 feet (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, July, August, September, October, November, December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.7 inches

*Content of organic matter in the upper 10 inches:* 1.2 percent

*Typical profile:*

Ap—0 to 9 inches; loamy sand

Bw—9 to 28 inches; sand

2Bt—28 to 48 inches; clay

3C—48 to 80 inches; sand

#### **Grettum and similar soils**

*Extent:* 20 to 40 percent of the mapped areas

*Geomorphic setting:* Outwash plains; lake plains

*Position on the landform:* Backslopes and shoulders

*Slope range:* 12 to 30 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Moderately well drained

*Parent material:* Sandy outwash or lacustrine deposits with lamellae

*Flooding:* None

*Shallowest depth to wet zone:* 4.5 feet (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, June, July, August, September, October, November, December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.3 inches

*Content of organic matter in the upper 10 inches:* 0.8 percent

*Typical profile:*

A—0 to 3 inches; loamy sand

Bw—3 to 32 inches; sand

E&Bt—32 to 75 inches; sand

C—75 to 80 inches; sand

#### **Perida and similar soils**

*Extent:* 10 to 40 percent of the mapped areas

*Geomorphic setting:* Outwash plains; lake plains

*Position on the landform:* Backslopes and shoulders

*Slope range:* 12 to 30 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Moderately well drained

*Parent material:* Mantle of sandy outwash or sandy lacustrine deposits over clayey lacustrine deposits underlain by sandy outwash or sandy lacustrine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 3.5 feet (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, July, August, September, October, November, December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.8 inches

*Content of organic matter in the upper 10 inches:* 1.2 percent

*Typical profile:*

Ap—0 to 9 inches; loamy sand

Bw1,Bw2,Bw3—9 to 43 inches; sand

Bw4—43 to 45 inches; loamy sand

2Bt1—45 to 60 inches; clay

2Bt2—60 to 74 inches; silty clay

3C—74 to 80 inches; sand

### ***Minor Dissimilar Components***

#### **Graycalm soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Menahga soils**

*Extent:* 0 to 15 percent of the mapped areas

## **497A—Meenon loamy sand, 0 to 3 percent slopes**

### ***Component Description***

#### **Meenon and similar soils**

*Extent:* 60 to 100 percent of the mapped areas

*Geomorphic setting:* Outwash plains; lake plains

*Position on the landform:* Footslopes

*Slope range:* 0 to 3 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Somewhat poorly drained

*Parent material:* Mantle of sandy outwash or sandy lacustrine deposits over clayey lacustrine deposits underlain by sandy outwash or sandy lacustrine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 0.5 foot (April, May)

*Deepest depth to wet zone:* More than 6.7 feet (July, August, September)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.3 inches

*Content of organic matter in the upper 10 inches:* 1.2 percent

*Typical profile:*

Ap—0 to 9 inches; loamy sand

Bw—9 to 28 inches; sand

2Btg—28 to 41 inches; clay

3C—41 to 80 inches; sand

### ***Minor Dissimilar Components***

#### **Karlsborg soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Chelmo soils**

*Extent:* 0 to 10 percent of the mapped areas

**Grettum soils***Extent:* 0 to 5 percent of the mapped areas**Perchlake soils***Extent:* 0 to 5 percent of the mapped areas**Dody soils***Extent:* 0 to 5 percent of the mapped areas**515A—Manitowish sandy loam, 0 to 3 percent slopes*****Component Description*****Manitowish and similar soils***Extent:* 70 to 100 percent of the mapped areas*Geomorphic setting:* Outwash plains; stream terraces*Position on the landform:* Footslopes*Slope range:* 0 to 3 percent*Depth to restrictive layer(s):* More than 80 inches*Drainage class:* Moderately well drained*Parent material:* Loamy alluvium underlain by stratified sandy and gravelly outwash*Flooding:* None*Shallowest depth to wet zone:* 2.5 feet (April)*Deepest depth to wet zone:* 5.5 feet (February, August)*Ponding:* None*Available water capacity to a depth of 60 inches:* 4.2 inches*Content of organic matter in the upper 10 inches:* 1.6 percent*Typical profile:*

A—0 to 3 inches; sandy loam

E—3 to 4 inches; sandy loam

Bs1—4 to 16 inches; sandy loam

2Bs2—16 to 19 inches; loamy coarse sand

2C—19 to 60 inches; stratified sand to very gravelly coarse sand

***Minor Dissimilar Components*****Pence soils***Extent:* 0 to 15 percent of the mapped areas**Wormet soils***Extent:* 0 to 10 percent of the mapped areas**Sayner soils***Extent:* 0 to 5 percent of the mapped areas**Worcester soils***Extent:* 0 to 5 percent of the mapped areas**521A—Dody muck, 0 to 2 percent slopes*****Component Description*****Dody and similar soils***Extent:* 70 to 100 percent of the mapped areas*Geomorphic setting:* Drainageways and depressions on lake plains*Slope range:* 0 to 2 percent*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Very poorly drained

*Parent material:* Mantle of sandy outwash or sandy lacustrine deposits over clayey lacustrine deposits underlain by sandy outwash or sandy lacustrine deposits

*Flooding:* None

*Shallowest depth to wet zone:* At the surface (March, April, May, November, December)

*Deepest depth to wet zone:* 2.5 feet (August, September)

*Months in which ponding does not occur:* January, February, March, June, July, August, September, December

*Deepest ponding:* 0.5 foot (April, May, October, November)

*Available water capacity to a depth of 60 inches:* 5.8 inches

*Content of organic matter in the upper 10 inches:* 11.5 percent

*Typical profile:*

Oa—0 to 3 inches; muck

Eg—3 to 9 inches; sand

Bw—9 to 20 inches; fine sand

Bg—20 to 23 inches; loamy sand

2Btg—23 to 47 inches; clay

3C1—47 to 58 inches; loamy sand

3C2—58 to 80 inches; sand

### ***Minor Dissimilar Components***

#### **Chelmo soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Meenon soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Markey soils**

*Extent:* 0 to 5 percent of the mapped areas

## **524E—Rock outcrop-Frogcreek-Metonga complex, 2 to 45 percent slopes, very stony**

### ***Component Description***

#### **Rock outcrop**

*Extent:* 15 to 60 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Summits and shoulders

*Slope range:* 2 to 45 percent

*Flooding:* None

*Ponding:* None

#### **Frogcreek and similar soils**

*Extent:* 15 to 40 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Backslopes

*Slope range:* 2 to 15 percent

*Depth to restrictive layer(s):* 40 to 60 inches to dense material

*Drainage class:* Moderately well drained

*Parent material:* Mantle of loess or silty alluvium and loamy alluvium underlain by dense sandy till

*Flooding:* None



*Shallowest depth to wet zone:* 1.0 foot (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, June, July, August, September)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 7.4 inches

*Content of organic matter in the upper 10 inches:* 2.1 percent

*Typical profile:*

A—0 to 4 inches; silt loam

E—4 to 13 inches; silt loam

2B/E—13 to 19 inches; loam

2Bt1—19 to 32 inches; sandy loam

2Bt2—32 to 46 inches; gravelly sandy loam

3Cd—46 to 80 inches; gravelly loamy sand

### **Metonga and similar soils**

*Extent:* 10 to 30 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Shoulders and backslopes

*Slope range:* 15 to 45 percent

*Depth to restrictive layer(s):* 20 to 40 inches to lithic bedrock

*Drainage class:* Well drained

*Parent material:* Silty or loamy eolian mantle and in underlying loamy till underlain by igneous or metamorphic bedrock

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 5.2 inches

*Content of organic matter in the upper 10 inches:* 1.2 percent

*Typical profile:*

A—0 to 3 inches; silt loam

E—3 to 4 inches; very fine sandy loam

Bs—4 to 25 inches; very fine sandy loam

2Bw—25 to 28 inches; sandy loam

3R—28 to 80 inches; unweathered bedrock

### ***Minor Dissimilar Components***

#### **Magroc soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Stanberry soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Stinnett soils**

*Extent:* 0 to 15 percent of the mapped areas

## **542B—Haugen, very stony-Haugen complex, 2 to 6 percent slopes**

### ***Component Description***

#### **Haugen, very stony, and similar soils**

*Extent:* 5 to 75 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Footslopes and summits

*Slope range:* 2 to 6 percent

*Depth to restrictive layer(s):* 60 to 80 inches to dense material

*Drainage class:* Moderately well drained

*Parent material:* Sandy loam till or mudflow sediments

*Flooding:* None

*Shallowest depth to wet zone:* 2.0 feet (March, April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, July, August, September, October)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 6.5 inches

*Content of organic matter in the upper 10 inches:* 1.2 percent

*Typical profile:*

A—0 to 4 inches; sandy loam

Bw1—4 to 15 inches; sandy loam

Bw2—15 to 23 inches; gravelly sandy loam

E/B—23 to 35 inches; gravelly sandy loam

B/E—35 to 49 inches; sandy loam

Bt—49 to 79 inches; gravelly sandy loam

Cd—79 to 80 inches; gravelly sandy loam

### **Haugen and similar soils**

*Extent:* 5 to 75 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Footslopes and summits

*Slope range:* 2 to 6 percent

*Depth to restrictive layer(s):* 60 to 80 inches to dense material

*Drainage class:* Moderately well drained

*Parent material:* Sandy loam till or mudflow sediments

*Flooding:* None

*Shallowest depth to wet zone:* 2.0 feet (March, April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, July, August, September, October)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 6.5 inches

*Content of organic matter in the upper 10 inches:* 1.6 percent

*Typical profile:*

Ap—0 to 7 inches; sandy loam

Bw1—7 to 15 inches; sandy loam

Bw2—15 to 23 inches; gravelly sandy loam

E/B—23 to 35 inches; gravelly sandy loam

B/E—35 to 49 inches; sandy loam

Bt—49 to 79 inches; gravelly sandy loam

Cd—79 to 80 inches; gravelly sandy loam

### **Minor Dissimilar Components**

#### **Freeon, very stony, soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Freeon soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Glendenning, very stony, soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Glendenning soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Capitola soils**

*Extent:* 0 to 10 percent of the mapped areas

**Scott Lake soils**

*Extent:* 0 to 5 percent of the mapped areas

## **542C—Haugen, very stony-Haugen complex, 6 to 12 percent slopes**

### ***Component Description***

**Haugen, very stony, and similar soils**

*Extent:* 5 to 75 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Shoulders and backslopes

*Slope range:* 6 to 12 percent

*Depth to restrictive layer(s):* 60 to 80 inches to dense material

*Drainage class:* Moderately well drained

*Parent material:* Sandy loam till or mudflow sediments

*Flooding:* None

*Shallowest depth to wet zone:* 2.0 feet (March, April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, July, August, September, October)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 6.5 inches

*Content of organic matter in the upper 10 inches:* 1.2 percent

*Typical profile:*

A—0 to 4 inches; sandy loam

Bw1—4 to 15 inches; sandy loam

Bw2—15 to 23 inches; gravelly sandy loam

E/B—23 to 35 inches; gravelly sandy loam

B/E—35 to 49 inches; sandy loam

Bt—49 to 79 inches; gravelly sandy loam

Cd—79 to 80 inches; gravelly sandy loam

**Haugen and similar soils**

*Extent:* 5 to 75 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Shoulders and backslopes

*Slope range:* 6 to 12 percent

*Depth to restrictive layer(s):* 60 to 80 inches to dense material

*Drainage class:* Moderately well drained

*Parent material:* Sandy loam till or mudflow sediments

*Flooding:* None

*Shallowest depth to wet zone:* 2.0 feet (March, April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, July, August, September, October)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 6.5 inches

*Content of organic matter in the upper 10 inches:* 1.6 percent

*Typical profile:*

Ap—0 to 7 inches; sandy loam

Bw1—7 to 15 inches; sandy loam

Bw2—15 to 23 inches; gravelly sandy loam

E/B—23 to 35 inches; gravelly sandy loam

B/E—35 to 49 inches; sandy loam

Bt—49 to 79 inches; gravelly sandy loam

Cd—79 to 80 inches; gravelly sandy loam

### ***Minor Dissimilar Components***

#### **Amery, very stony, soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Amery soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Freeon, very stony, soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Freeon soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Crystal Lake soils**

*Extent:* 0 to 5 percent of the mapped areas

#### **Glendenning, very stony, soils**

*Extent:* 0 to 5 percent of the mapped areas

#### **Glendenning soils**

*Extent:* 0 to 5 percent of the mapped areas

#### **Capitola soils**

*Extent:* 0 to 5 percent of the mapped areas

## **543B—Anigon silt loam, 2 to 6 percent slopes**

### ***Component Description***

#### **Anigon and similar soils**

*Extent:* 70 to 100 percent of the mapped areas

*Geomorphic setting:* Outwash plains; stream terraces

*Position on the landform:* Summits

*Slope range:* 2 to 6 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Well drained

*Parent material:* Loess or silty alluvium underlain by stratified sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 7.8 inches

*Content of organic matter in the upper 10 inches:* 2.0 percent

*Typical profile:*

Ap—0 to 10 inches; silt loam

E—10 to 14 inches; silt loam

B/E—14 to 20 inches; silt loam

Bt1—20 to 30 inches; silt loam

2Bt2—30 to 34 inches; sandy loam

3C—34 to 60 inches; stratified sand to very gravelly coarse sand

### ***Minor Dissimilar Components***

#### **Brill soils**

*Extent:* 0 to 15 percent of the mapped areas

**Rosholt soils***Extent:* 0 to 10 percent of the mapped areas**Poskin soils***Extent:* 0 to 5 percent of the mapped areas**543C2—Anigon silt loam, 6 to 12 percent slopes, eroded*****Component Description*****Anigon and similar soils***Extent:* 70 to 100 percent of the mapped areas*Geomorphic setting:* Outwash plains; stream terraces*Position on the landform:* Backslopes and shoulders*Slope range:* 6 to 12 percent*Depth to restrictive layer(s):* More than 80 inches*Drainage class:* Well drained*Parent material:* Loess or silty alluvium underlain by stratified sandy and gravelly outwash*Flooding:* None*Depth to wet zone:* More than 6.7 feet all year*Ponding:* None*Available water capacity to a depth of 60 inches:* 7.8 inches*Content of organic matter in the upper 10 inches:* 2.0 percent*Typical profile:*

Ap—0 to 10 inches; silt loam

E—10 to 14 inches; silt loam

B/E—14 to 20 inches; silt loam

Bt1—20 to 30 inches; silt loam

2Bt2—30 to 34 inches; sandy loam

3C—34 to 60 inches; stratified sand to very gravelly coarse sand

***Minor Dissimilar Components*****Rosholt soils***Extent:* 0 to 15 percent of the mapped areas**Brill soils***Extent:* 0 to 10 percent of the mapped areas**544F—Menahga and Mahtomedi soils, 30 to 45 percent slopes*****Component Description*****Menahga and similar soils***Extent:* 0 to 100 percent of the mapped areas*Geomorphic setting:* Stream terraces; outwash plains*Position on the landform:* Shoulders and backslopes*Slope range:* 30 to 45 percent*Depth to restrictive layer(s):* More than 80 inches*Drainage class:* Excessively drained*Parent material:* Sandy outwash*Flooding:* None*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 3.8 inches

*Content of organic matter in the upper 10 inches:* 0.3 percent

*Typical profile:*

Oi—0 to 1 inch; slightly decomposed plant material

A—1 to 2 inches; sand

Bw—2 to 25 inches; sand

C—25 to 80 inches; sand

#### **Mahtomedi and similar soils**

*Extent:* 0 to 100 percent of the mapped areas

*Geomorphic setting:* Stream terraces; outwash plains

*Position on the landform:* Shoulders and backslopes

*Slope range:* 30 to 45 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Excessively drained

*Parent material:* Sandy outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 2.7 inches

*Content of organic matter in the upper 10 inches:* 0.5 percent

*Typical profile:*

A—0 to 5 inches; loamy sand

E—5 to 8 inches; sand

Bw1—8 to 15 inches; gravelly coarse sand

Bw2—15 to 30 inches; gravelly sand

C—30 to 60 inches; gravelly sand

### ***Minor Dissimilar Components***

#### **Graycalm soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Grettum soils**

*Extent:* 0 to 10 percent of the mapped areas

## **555A—Fordum silt loam, 0 to 2 percent slopes, frequently flooded**

### ***Component Description***

#### **Fordum and similar soils**

*Extent:* 75 to 100 percent of the mapped areas

*Geomorphic setting:* Flood plains

*Slope range:* 0 to 2 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Poorly drained

*Parent material:* Silty or loamy alluvium underlain by sandy and gravelly alluvium

*Lowest frequency of flooding (if it occurs):* Rare (January, February, July, August, December)

*Highest frequency of flooding:* Frequent (April, May)

*Shallowest depth to wet zone:* At the surface (April, May, November)

*Deepest depth to wet zone:* 2.5 feet (February, August)

*Months in which ponding does not occur:* January, February, March, June, July, August, September, October, November, December

*Deepest ponding:* 0.5 foot (April, May)

*Available water capacity to a depth of 60 inches:* 7.2 inches

*Content of organic matter in the upper 10 inches:* 7.4 percent

*Typical profile:*

A—0 to 6 inches; silt loam

Cg1—6 to 18 inches; silt loam

Cg2—18 to 30 inches; fine sandy loam

2Cg—30 to 60 inches; sand

### ***Minor Dissimilar Components***

#### **Somewhat poorly drained soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Bowstring soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Moppet soils**

*Extent:* 0 to 5 percent of the mapped areas

## **574B—Sayner loamy sand, 0 to 6 percent slopes**

### ***Component Description***

#### **Sayner and similar soils**

*Extent:* 75 to 100 percent of the mapped areas

*Geomorphic setting:* Outwash plains; eskers; outwash terraces

*Position on the landform:* Summits

*Slope range:* 0 to 6 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Excessively drained

*Parent material:* Stratified sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 3.1 inches

*Content of organic matter in the upper 10 inches:* 1.4 percent

*Typical profile:*

A—0 to 2 inches; loamy sand

E—2 to 4 inches; loamy sand

Bs1—4 to 7 inches; loamy sand

Bs2—7 to 14 inches; sand

BC—14 to 22 inches; gravelly sand

C—22 to 60 inches; stratified sand to very gravelly coarse sand

### ***Minor Dissimilar Components***

#### **Pence soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Rubicon soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Moderately well drained soils**

*Extent:* 0 to 10 percent of the mapped areas



**574C—Sayner loamy sand, 6 to 15 percent slopes*****Component Description*****Sayner and similar soils**

*Extent:* 85 to 100 percent of the mapped areas

*Geomorphic setting:* Eskers; outwash plains

*Position on the landform:* Shoulders and backslopes

*Slope range:* 6 to 15 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Excessively drained

*Parent material:* Stratified sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 3.1 inches

*Content of organic matter in the upper 10 inches:* 1.4 percent

*Typical profile:*

A—0 to 2 inches; loamy sand

E—2 to 4 inches; loamy sand

Bs1—4 to 7 inches; loamy sand

Bs2—7 to 14 inches; sand

BC—14 to 22 inches; gravelly sand

C—22 to 60 inches; stratified sand to very gravelly coarse sand

***Minor Dissimilar Components*****Pence soils**

*Extent:* 0 to 10 percent of the mapped areas

**Rubicon soils**

*Extent:* 0 to 10 percent of the mapped areas

**574E—Sayner loamy sand, 15 to 45 percent slopes*****Component Description*****Sayner and similar soils**

*Extent:* 85 to 100 percent of the mapped areas

*Geomorphic setting:* Eskers; outwash plains

*Position on the landform:* Shoulders and backslopes

*Slope range:* 15 to 45 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Excessively drained

*Parent material:* Stratified sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 3.1 inches

*Content of organic matter in the upper 10 inches:* 1.4 percent

*Typical profile:*

A—0 to 2 inches; loamy sand

E—2 to 4 inches; loamy sand

Bs1—4 to 7 inches; loamy sand

Bs2—7 to 14 inches; sand  
 BC—14 to 22 inches; gravelly sand  
 C—22 to 60 inches; stratified sand to very gravelly coarse sand

### ***Minor Dissimilar Components***

#### **Pence soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Rubicon soils**

*Extent:* 0 to 10 percent of the mapped areas

## **579B—Parkfalls sandy loam, 0 to 4 percent slopes, very stony**

### ***Component Description***

#### **Parkfalls and similar soils**

*Extent:* 75 to 100 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Footslopes

*Slope range:* 0 to 4 percent

*Depth to restrictive layer(s):* 30 to 50 inches to dense material

*Drainage class:* Somewhat poorly drained

*Parent material:* Loamy alluvium underlain by dense sandy till

*Flooding:* None

*Shallowest depth to wet zone:* 0.5 foot (April)

*Deepest depth to wet zone:* More than 6.7 feet (July, August)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.9 inches

*Content of organic matter in the upper 10 inches:* 1.4 percent

*Typical profile:*

A—0 to 5 inches; sandy loam  
 E—5 to 8 inches; sandy loam  
 Bs—8 to 17 inches; sandy loam  
 E/B—17 to 30 inches; sandy loam  
 Bt—30 to 33 inches; sandy loam  
 BCd—33 to 48 inches; sandy loam  
 2Cd—48 to 80 inches; loamy sand

### ***Minor Dissimilar Components***

#### **Wozny soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Stanberry soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Stinnett soils**

*Extent:* 0 to 5 percent of the mapped areas

## **600A—Haplosaprists and Psammaquents, 0 to 2 percent slopes**

### ***Component Description***

#### **Haplosaprists and similar soils**

*Extent:* 0 to 100 percent of the mapped areas

*Slope range:* 0 to 1 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Very poorly drained

*Flooding:* None

*Wet zone:* At the surface all year

*Ponding depth:* 1.0 foot all year

*General description:* Haplosaprists are areas of very poorly drained organic soils that have been altered for use as cranberry beds. The alterations include excavating the organic material, filling with sand, and constructing ditches and dikes.

#### **Psammaquents and similar soils**

*Extent:* 0 to 100 percent of the mapped areas

*Slope range:* 0 to 2 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Very poorly drained

*Flooding:* None

*Wet zone:* At the surface all year

*Ponding depth:* 1.0 foot all year

*General description:* Psammaquents are areas of poorly drained and very poorly drained sandy soils that have been altered for use as cranberry beds. The alterations include land leveling and constructing ditches and dikes.

### ***Minor Dissimilar Components***

#### **Dikes**

*Extent:* 0 to 15 percent of the mapped areas

#### **Poorly drained and very poorly drained loamy soils**

*Extent:* 0 to 5 percent of the mapped areas

## **615B—Cress sandy loam, 0 to 6 percent slopes**

### ***Component Description***

#### **Cress and similar soils**

*Extent:* 55 to 100 percent of the mapped areas

*Geomorphic setting:* Outwash plains; stream terraces

*Position on the landform:* Summits

*Slope range:* 0 to 6 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Somewhat excessively drained

*Parent material:* Loamy alluvium underlain by stratified sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.3 inches

*Content of organic matter in the upper 10 inches:* 0.9 percent

*Typical profile:*

A—0 to 3 inches; sandy loam

Bw1—3 to 15 inches; sandy loam

2Bw2—15 to 31 inches; loamy sand

2Bw3—31 to 36 inches; gravelly loamy sand

2C—36 to 60 inches; stratified sand to very gravelly coarse sand

### ***Minor Dissimilar Components***

#### **Chetek soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Menahga soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Mahtomedi soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Slimlake soils**

*Extent:* 0 to 5 percent of the mapped areas

#### **Rosholt soils**

*Extent:* 0 to 5 percent of the mapped areas

## **615C—Cress sandy loam, 6 to 12 percent slopes**

### ***Component Description***

#### **Cress and similar soils**

*Extent:* 55 to 100 percent of the mapped areas

*Geomorphic setting:* Outwash plains; stream terraces

*Position on the landform:* Shoulders and backslopes

*Slope range:* 6 to 12 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Somewhat excessively drained

*Parent material:* Loamy alluvium underlain by stratified sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.3 inches

*Content of organic matter in the upper 10 inches:* 0.9 percent

*Typical profile:*

A—0 to 3 inches; sandy loam

Bw1—3 to 15 inches; sandy loam

2Bw2—15 to 31 inches; loamy sand

2Bw3—31 to 36 inches; gravelly loamy sand

2C—36 to 60 inches; stratified sand to very gravelly coarse sand

### ***Minor Dissimilar Components***

#### **Chetek soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Menahga soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Mahtomedi soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Rosholt soils**

*Extent:* 0 to 5 percent of the mapped areas

**615D—Cress sandy loam, 12 to 30 percent slopes*****Component Description*****Cress and similar soils**

*Extent:* 55 to 100 percent of the mapped areas

*Geomorphic setting:* Outwash plains; stream terraces

*Position on the landform:* Shoulders and backslopes

*Slope range:* 12 to 30 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Somewhat excessively drained

*Parent material:* Loamy alluvium underlain by stratified sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.3 inches

*Content of organic matter in the upper 10 inches:* 0.9 percent

*Typical profile:*

A—0 to 3 inches; sandy loam

Bw1—3 to 15 inches; sandy loam

2Bw2—15 to 31 inches; loamy sand

2Bw3—31 to 36 inches; gravelly loamy sand

2C—36 to 60 inches; stratified sand to very gravelly coarse sand

***Minor Dissimilar Components*****Chetek soils**

*Extent:* 0 to 15 percent of the mapped areas

**Menahga soils**

*Extent:* 0 to 15 percent of the mapped areas

**Mahtomedi soils**

*Extent:* 0 to 10 percent of the mapped areas

**Rosholt soils**

*Extent:* 0 to 5 percent of the mapped areas

**623A—Capitola muck, 0 to 2 percent slopes, very stony*****Component Description*****Capitola and similar soils**

*Extent:* 65 to 100 percent of the mapped areas

*Geomorphic setting:* Depressions and drainageways on moraines

*Slope range:* 0 to 2 percent

*Depth to restrictive layer(s):* 20 to 40 inches to dense material

*Drainage class:* Very poorly drained

*Parent material:* Silty or loamy alluvium underlain by dense loamy till

*Flooding:* None

*Shallowest depth to wet zone:* At the surface (April, May, November)

*Deepest depth to wet zone:* More than 6.7 feet (July, August)

*Months in which ponding does not occur:* January, February, March, June, July,

August, September, October, November, December

*Deepest ponding:* 0.5 foot (April, May)

*Available water capacity to a depth of 60 inches: 7.5 inches*

*Content of organic matter in the upper 10 inches: 35.3 percent*

*Typical profile:*

Oa—0 to 5 inches; muck

A—5 to 7 inches; silt loam

Bg—7 to 22 inches; silt loam

2Btg—22 to 33 inches; sandy loam

2Cd—33 to 60 inches; sandy loam

### ***Minor Dissimilar Components***

#### **Cathro soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Pesabic soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Beseman soils**

*Extent:* 0 to 5 percent of the mapped areas

#### **Magnor soils**

*Extent:* 0 to 5 percent of the mapped areas

#### **Capitola soils that are flooded for brief periods**

*Extent:* 0 to 5 percent of the mapped areas

#### **Cebana soils**

*Extent:* 0 to 5 percent of the mapped areas

## **624A—Ossmer silt loam, 0 to 3 percent slopes**

### ***Component Description***

#### **Ossmer and similar soils**

*Extent:* 70 to 100 percent of the mapped areas

*Geomorphic setting:* Outwash plains; stream terraces

*Position on the landform:* Footslopes

*Slope range:* 0 to 3 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Somewhat poorly drained

*Parent material:* Loess or silty alluvium underlain by sandy and gravelly outwash

*Flooding:* None

*Shallowest depth to wet zone:* 0.5 foot (April)

*Deepest depth to wet zone:* 4.0 feet (February, August)

*Ponding:* None

*Available water capacity to a depth of 60 inches: 7.9 inches*

*Content of organic matter in the upper 10 inches: 1.2 percent*

*Typical profile:*

A—0 to 4 inches; silt loam

E—4 to 6 inches; silt loam

E/B—6 to 11 inches; silt loam

B/E—11 to 26 inches; silt loam

2Bt1—26 to 34 inches; loam

2Bt2—34 to 38 inches; sandy loam

3C—38 to 60 inches; stratified sand to very gravelly coarse sand

***Minor Dissimilar Components*****Billyboy soils**

*Extent:* 0 to 10 percent of the mapped areas

**Annriver soils**

*Extent:* 0 to 10 percent of the mapped areas

**Maincreek soils**

*Extent:* 0 to 10 percent of the mapped areas

**Sconsin soils**

*Extent:* 0 to 5 percent of the mapped areas

**632A—Aftad fine sandy loam, 0 to 2 percent slopes*****Component Description*****Aftad and similar soils**

*Extent:* 70 to 100 percent of the mapped areas

*Geomorphic setting:* Lake plains; stream terraces

*Position on the landform:* Summits

*Slope range:* 0 to 2 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Moderately well drained

*Parent material:* Mostly loamy lacustrine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 2.0 feet (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, March, August, September, October, December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 9.3 inches

*Content of organic matter in the upper 10 inches:* 2.0 percent

*Typical profile:*

Ap—0 to 10 inches; fine sandy loam

E/B—10 to 29 inches; fine sandy loam

B/E—29 to 36 inches; fine sandy loam

Bt—36 to 41 inches; fine sandy loam

C—41 to 60 inches; stratified fine sand to silt

***Minor Dissimilar Components*****Plover soils**

*Extent:* 0 to 15 percent of the mapped areas

**Comstock soils**

*Extent:* 0 to 10 percent of the mapped areas

**Scott Lake soils**

*Extent:* 0 to 5 percent of the mapped areas

**632B—Aftad fine sandy loam, 2 to 6 percent slopes*****Component Description*****Aftad and similar soils**

*Extent:* 75 to 100 percent of the mapped areas



*Geomorphic setting:* Lake plains; stream terraces

*Position on the landform:* Summits

*Slope range:* 2 to 6 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Moderately well drained

*Parent material:* Mostly loamy lacustrine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 2.0 feet (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, March, August, September, October, December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 9.3 inches

*Content of organic matter in the upper 10 inches:* 2.0 percent

*Typical profile:*

Ap—0 to 10 inches; fine sandy loam

E/B—10 to 29 inches; fine sandy loam

B/E—29 to 36 inches; fine sandy loam

Bt—36 to 41 inches; fine sandy loam

C—41 to 60 inches; stratified fine sand to silt

### ***Minor Dissimilar Components***

#### **Plover soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Scott Lake soils**

*Extent:* 0 to 5 percent of the mapped areas

#### **Crystal Lake soils**

*Extent:* 0 to 5 percent of the mapped areas

## **632C—Aftad fine sandy loam, 6 to 12 percent slopes**

### ***Component Description***

#### **Aftad and similar soils**

*Extent:* 75 to 100 percent of the mapped areas

*Geomorphic setting:* Lake plains; stream terraces

*Position on the landform:* Shoulders and backslopes

*Slope range:* 6 to 12 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Moderately well drained

*Parent material:* Mostly loamy lacustrine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 2.0 feet (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, March, August, September, October, November, December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 9.3 inches

*Content of organic matter in the upper 10 inches:* 2.0 percent

*Typical profile:*

Ap—0 to 10 inches; fine sandy loam

E/B—10 to 29 inches; fine sandy loam

B/E—29 to 36 inches; fine sandy loam

Bt—36 to 41 inches; fine sandy loam

C—41 to 60 inches; stratified fine sand to silt

***Minor Dissimilar Components*****Crystal Lake soils**

*Extent:* 0 to 15 percent of the mapped areas

**Scott Lake soils**

*Extent:* 0 to 5 percent of the mapped areas

**Plover soils**

*Extent:* 0 to 5 percent of the mapped areas

**633F—Pence and Padus soils, 30 to 45 percent slopes*****Component Description*****Pence and similar soils**

*Extent:* 0 to 100 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Backslopes and shoulders

*Slope range:* 30 to 45 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Somewhat excessively drained

*Parent material:* Loamy alluvium underlain by sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.0 inches

*Content of organic matter in the upper 10 inches:* 1.3 percent

*Typical profile:*

A—0 to 3 inches; sandy loam

E—3 to 8 inches; sandy loam

Bs—8 to 15 inches; gravelly sandy loam

2BC—15 to 21 inches; gravelly coarse sand

2C—21 to 60 inches; stratified sand to very gravelly coarse sand

**Padus and similar soils**

*Extent:* 0 to 100 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Backslopes and shoulders

*Slope range:* 30 to 45 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Well drained

*Parent material:* Loamy alluvium underlain by sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 6.0 inches

*Content of organic matter in the upper 10 inches:* 1.5 percent

*Typical profile:*

A—0 to 2 inches; sandy loam

E—2 to 3 inches; sandy loam

Bs—3 to 19 inches; sandy loam

E/B—19 to 26 inches; sandy loam

B/E—26 to 38 inches; sandy loam

2C—38 to 60 inches; stratified sand to very gravelly coarse sand

### ***Minor Dissimilar Components***

#### **Sayner soils**

*Extent:* 0 to 10 percent of the mapped areas

## **648B—Sconsin silt loam, 1 to 6 percent slopes**

### ***Component Description***

#### **Sconsin and similar soils**

*Extent:* 65 to 100 percent of the mapped areas

*Geomorphic setting:* Outwash terraces; stream terraces; outwash plains

*Position on the landform:* Summits

*Slope range:* 1 to 6 percent

*Depth to restrictive layer(s):* 20 to 38 inches to dense material

*Drainage class:* Moderately well drained

*Parent material:* Loess or silty alluvium underlain by sandy and gravelly outwash

*Flooding:* None

*Shallowest depth to wet zone:* 1.5 feet (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, March, May, June, July, August, September, October, November, December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 7.9 inches

*Content of organic matter in the upper 10 inches:* 1.5 percent

*Typical profile:*

A—0 to 4 inches; silt loam

E—4 to 5 inches; silt loam

Bw—5 to 10 inches; silt loam

E'—10 to 18 inches; silt loam

E/B—18 to 27 inches; silt loam

2B/E—27 to 34 inches; loam

2BCd—34 to 38 inches; sandy loam

3C—38 to 60 inches; stratified sand to very gravelly coarse sand

### ***Minor Dissimilar Components***

#### **Antigo soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Maincreek soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Billyboy soils**

*Extent:* 0 to 5 percent of the mapped areas

#### **Ossmer soils**

*Extent:* 0 to 5 percent of the mapped areas

## **670C—Keweenaw-Pence complex, 6 to 15 percent slopes, stony**

### ***Component Description***

#### **Keweenaw and similar soils**

*Extent:* 30 to 75 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Shoulders and backslopes

*Slope range:* 6 to 15 percent  
*Depth to restrictive layer(s):* More than 80 inches  
*Drainage class:* Well drained  
*Parent material:* Sandy till  
*Flooding:* None  
*Depth to wet zone:* More than 6.7 feet all year  
*Ponding:* None  
*Available water capacity to a depth of 60 inches:* 5.8 inches  
*Content of organic matter in the upper 10 inches:* 0.6 percent  
*Typical profile:*

A—0 to 2 inches; sandy loam  
 E—2 to 4 inches; sandy loam  
 Bs1,Bs2—4 to 16 inches; sandy loam  
 Bs3—16 to 20 inches; loamy sand  
 E'—20 to 27 inches; loamy sand  
 E/B—27 to 43 inches; sand  
 B/E—43 to 75 inches; loamy sand  
 C—75 to 80 inches; loamy sand

#### **Pence and similar soils**

*Extent:* 25 to 40 percent of the mapped areas  
*Geomorphic setting:* Disintegration moraines  
*Position on the landform:* Shoulders and backslopes  
*Slope range:* 6 to 15 percent  
*Depth to restrictive layer(s):* More than 80 inches  
*Drainage class:* Somewhat excessively drained  
*Parent material:* Mostly loamy alluvium underlain by stratified sandy and gravelly outwash  
*Flooding:* None  
*Depth to wet zone:* More than 6.7 feet all year  
*Ponding:* None  
*Available water capacity to a depth of 60 inches:* 4.0 inches  
*Content of organic matter in the upper 10 inches:* 1.3 percent  
*Typical profile:*

A—0 to 3 inches; sandy loam  
 E—3 to 8 inches; sandy loam  
 Bs—8 to 15 inches; gravelly sandy loam  
 2BC—15 to 21 inches; gravelly coarse sand  
 2C—21 to 60 inches; stratified sand to very gravelly coarse sand

#### ***Minor Dissimilar Components***

#### **Padus soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Sayner soils**

*Extent:* 0 to 15 percent of the mapped areas

### **670E—Keweenaw-Pence complex, 15 to 45 percent slopes, stony**

#### ***Component Description***

#### **Keweenaw and similar soils**

*Extent:* 35 to 75 percent of the mapped areas  
*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Shoulders and backslopes

*Slope range:* 15 to 45 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Well drained

*Parent material:* Sandy till

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 5.8 inches

*Content of organic matter in the upper 10 inches:* 0.6 percent

*Typical profile:*

A—0 to 2 inches; sandy loam

E—2 to 4 inches; sandy loam

Bs1,Bs2—4 to 16 inches; sandy loam

Bs3—16 to 20 inches; loamy sand

E'—20 to 27 inches; loamy sand

E/B—27 to 43 inches; sand

B/E—43 to 75 inches; loamy sand

C—75 to 80 inches; loamy sand

#### **Pence and similar soils**

*Extent:* 25 to 35 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Shoulders and backslopes

*Slope range:* 15 to 45 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Somewhat excessively drained

*Parent material:* Mostly loamy alluvium underlain by stratified sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.0 inches

*Content of organic matter in the upper 10 inches:* 1.3 percent

*Typical profile:*

A—0 to 3 inches; sandy loam

E—3 to 8 inches; sandy loam

Bs—8 to 15 inches; gravelly sandy loam

2BC—15 to 21 inches; gravelly coarse sand

2C—21 to 60 inches; stratified sand to very gravelly coarse sand

#### ***Minor Dissimilar Components***

#### **Padus soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Sayner soils**

*Extent:* 0 to 15 percent of the mapped areas

### **671B—Spoonerhill, stony-Spoonerhill complex, 2 to 6 percent slopes**

#### ***Component Description***

#### **Spoonerhill, stony, and similar soils**

*Extent:* 5 to 95 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Footslopes

*Slope range:* 2 to 6 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Moderately well drained

*Parent material:* Thin mantle of loamy alluvium and sandy alluvium underlain by sandy till

*Flooding:* None

*Shallowest depth to wet zone:* 2.0 feet (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, March, June, July, August, September, October, December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.3 inches

*Content of organic matter in the upper 10 inches:* 1.0 percent

*Typical profile:*

A—0 to 3 inches; sandy loam

Bw1—3 to 12 inches; gravelly sandy loam

2Bw2—12 to 16 inches; gravelly loamy sand

2E/B—16 to 34 inches; loamy sand

2C1—34 to 46 inches; sand

2C2—46 to 80 inches; gravelly loamy sand

#### **Spoonerhill and similar soils**

*Extent:* 5 to 95 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Footslopes

*Slope range:* 2 to 6 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Moderately well drained

*Parent material:* Thin mantle of loamy alluvium and sandy alluvium underlain by sandy till

*Flooding:* None

*Shallowest depth to wet zone:* 2.0 feet (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, March, June, July, August, September, October, December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.3 inches

*Content of organic matter in the upper 10 inches:* 1.0 percent

*Typical profile:*

A—0 to 3 inches; sandy loam

Bw1—3 to 12 inches; gravelly sandy loam

2Bw2—12 to 16 inches; gravelly loamy sand

2E/B—16 to 34 inches; loamy sand

2C1—34 to 46 inches; sand

2C2—46 to 80 inches; gravelly loamy sand

#### ***Minor Dissimilar Components***

##### **Fremstadt soils**

*Extent:* 0 to 10 percent of the mapped areas

##### **Slimlake soils**

*Extent:* 0 to 10 percent of the mapped areas

##### **Grettum soils**

*Extent:* 0 to 5 percent of the mapped areas

**Haugen soils***Extent:* 0 to 5 percent of the mapped areas**Cress soils***Extent:* 0 to 5 percent of the mapped areas**Glendenning soils***Extent:* 0 to 5 percent of the mapped areas**680B—Stanberry-Pence complex, 2 to 6 percent slopes, stony*****Component Description*****Stanberry, stony, and similar soils***Extent:* 50 to 70 percent of the mapped areas*Geomorphic setting:* Disintegration moraines*Position on the landform:* Summits*Slope range:* 2 to 6 percent*Depth to restrictive layer(s):* 40 to 60 inches to dense material*Drainage class:* Moderately well drained*Parent material:* Loamy alluvium underlain by dense sandy till*Flooding:* None*Shallowest depth to wet zone:* 2.0 feet (April)*Deepest depth to wet zone:* More than 6.7 feet (January, February, March, June, July, August, September, October, December)*Ponding:* None*Available water capacity to a depth of 60 inches:* 6.1 inches*Content of organic matter in the upper 10 inches:* 1.2 percent*Typical profile:*

Oa—0 to 1 inch; highly decomposed plant material

E—1 to 3 inches; sandy loam

Bs—3 to 19 inches; sandy loam

E/B—19 to 24 inches; sandy loam

B/E—24 to 32 inches; sandy loam

2BC—32 to 42 inches; loamy sand

2Cd—42 to 80 inches; loamy sand

**Pence, stony, and similar soils***Extent:* 20 to 40 percent of the mapped areas*Geomorphic setting:* Disintegration moraines*Position on the landform:* Summits*Slope range:* 2 to 6 percent*Depth to restrictive layer(s):* More than 80 inches*Drainage class:* Somewhat excessively drained*Parent material:* Mostly loamy alluvium underlain by stratified sandy and gravelly outwash*Flooding:* None*Depth to wet zone:* More than 6.7 feet all year*Ponding:* None*Available water capacity to a depth of 60 inches:* 4.0 inches*Content of organic matter in the upper 10 inches:* 1.3 percent*Typical profile:*

A—0 to 3 inches; sandy loam

E—3 to 8 inches; sandy loam

Bs—8 to 15 inches; gravelly sandy loam



2BC—15 to 21 inches; gravelly coarse sand

2C—21 to 60 inches; stratified sand to very gravelly coarse sand

### ***Minor Dissimilar Components***

#### **Parkfalls soils that are stony**

*Extent:* 0 to 10 percent of the mapped areas

#### **Keweenaw soils that are stony**

*Extent:* 0 to 5 percent of the mapped areas

## **683A—Tipler sandy loam, 0 to 3 percent slopes**

### ***Component Description***

#### **Tipler and similar soils**

*Extent:* 80 to 100 percent of the mapped areas

*Geomorphic setting:* Stream terraces; outwash plains

*Position on the landform:* Footslopes

*Slope range:* 0 to 3 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Moderately well drained

*Parent material:* Loamy alluvium underlain by sandy and gravelly outwash

*Flooding:* None

*Shallowest depth to wet zone:* 2.5 feet (April)

*Deepest depth to wet zone:* 5.5 feet (February, August)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 5.5 inches

*Content of organic matter in the upper 10 inches:* 1.7 percent

*Typical profile:*

A—0 to 3 inches; sandy loam

E—3 to 5 inches; sandy loam

Bs—5 to 19 inches; sandy loam

B/E—19 to 26 inches; sandy loam

Bt—26 to 33 inches; sandy loam

2C—33 to 60 inches; stratified sand to very gravelly coarse sand

### ***Minor Dissimilar Components***

#### **Padus soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Worcester soils**

*Extent:* 0 to 10 percent of the mapped areas

## **706A—Winterfield-Totagatic complex, 0 to 2 percent slopes, frequently flooded**

### ***Component Description***

#### **Winterfield and similar soils**

*Extent:* 50 to 80 percent of the mapped areas

*Geomorphic setting:* Flood plains

*Slope range:* 1 to 2 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Somewhat poorly drained

*Parent material:* Sandy alluvium

*Lowest frequency of flooding (if it occurs):* Rare (January, February, December)

*Highest frequency of flooding:* Frequent (April)

*Shallowest depth to wet zone:* 0.5 foot (April)

*Deepest depth to wet zone:* 3.0 feet (September, October)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 5.0 inches

*Content of organic matter in the upper 10 inches:* 2.2 percent

*Typical profile:*

A—0 to 7 inches; very fine sandy loam

C—7 to 60 inches; sand

#### **Totagatic and similar soils**

*Extent:* 15 to 40 percent of the mapped areas

*Geomorphic setting:* Flood plains

*Slope range:* 0 to 2 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Poorly drained

*Parent material:* Mostly sandy alluvium

*Lowest frequency of flooding (if it occurs):* Rare (January, February, July, August, December)

*Highest frequency of flooding:* Frequent (April, May)

*Shallowest depth to wet zone:* At the surface (May, November, December)

*Deepest depth to wet zone:* More than 6.7 feet (April)

*Months in which ponding does not occur:* January, February, March, June, July, August, September, October, November, December

*Deepest ponding:* 0.5 foot (April, May)

*Available water capacity to a depth of 60 inches:* 4.4 inches

*Content of organic matter in the upper 10 inches:* 0.8 percent

*Typical profile:*

A—0 to 4 inches; fine sandy loam

Bw1—4 to 8 inches; loamy fine sand

Bw2—8 to 17 inches; fine sand

Cg1—17 to 28 inches; fine sand

Cg2—28 to 46 inches; sand

C—46 to 70 inches; sand

C'g—70 to 80 inches; sand

#### ***Minor Dissimilar Components***

##### **Bowstring soils**

*Extent:* 0 to 10 percent of the mapped areas

##### **Moquah soils**

*Extent:* 0 to 10 percent of the mapped areas

##### **Pelkie soils**

*Extent:* 0 to 5 percent of the mapped areas

## **724A—Rib-Rock outcrop complex, 0 to 2 percent slopes**

### ***Component Description***

#### **Rib and similar soils**

*Extent:* 40 to 90 percent of the mapped areas

*Geomorphic setting:* Drainageways on disintegration moraines

*Slope range:* 0 to 2 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Poorly drained

*Parent material:* Silty alluvium over loamy alluvium underlain by stratified sandy and gravelly outwash

*Flooding:* None

*Shallowest depth to wet zone:* At the surface (April, May, November)

*Deepest depth to wet zone:* 2.5 feet (February, August)

*Months in which ponding does not occur:* January, February, March, June, July, August, September, October, November, December

*Deepest ponding:* 0.5 foot (April, May)

*Available water capacity to a depth of 60 inches:* 8.3 inches

*Content of organic matter in the upper 10 inches:* 4.8 percent

*Typical profile:*

A—0 to 7 inches; silt loam

Eg—7 to 10 inches; silt loam

Btg—10 to 32 inches; silt loam

2Btg—32 to 35 inches; loam

3BC—35 to 37 inches; gravelly loamy sand

3C—37 to 60 inches; stratified sand to very gravelly coarse sand

#### **Rock outcrop**

*Extent:* 3 to 15 percent of the mapped areas

*Geomorphic setting:* Drainageways on disintegration moraines

### ***Minor Dissimilar Components***

#### **Barronett soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Poskin soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Cathro soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Magroc soils**

*Extent:* 0 to 10 percent of the mapped areas

## **726B—Sissabagama loamy sand, 0 to 6 percent slopes**

### ***Component Description***

#### **Sissabagama and similar soils**

*Extent:* 75 to 100 percent of the mapped areas

*Geomorphic setting:* Lake plains

*Position on the landform:* Summits

*Slope range:* 0 to 6 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Moderately well drained

*Parent material:* Sandy deposits underlain by stratified sandy and loamy lacustrine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 2.5 feet (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, March, August, September, October, December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 5.7 inches

*Content of organic matter in the upper 10 inches:* 2.0 percent

*Typical profile:*

Ap—0 to 10 inches; loamy sand  
 Bw—10 to 31 inches; sand  
 E&Bt—31 to 45 inches; sand  
 2C—45 to 80 inches; stratified very fine sand to silt

***Minor Dissimilar Components*****Grettum soils**

*Extent:* 0 to 15 percent of the mapped areas

**Wurtsmith soils**

*Extent:* 0 to 5 percent of the mapped areas

**Perida soils**

*Extent:* 0 to 5 percent of the mapped areas

**733A—Wozny muck, 0 to 2 percent slopes, very stony*****Component Description*****Wozny and similar soils**

*Extent:* 70 to 100 percent of the mapped areas

*Geomorphic setting:* Drainageways and depressions on disintegration moraines

*Slope range:* 0 to 2 percent

*Depth to restrictive layer(s):* 40 to 60 inches to dense material

*Drainage class:* Very poorly drained

*Parent material:* Loess or silty alluvium and loamy alluvium underlain by dense sandy till

*Flooding:* None

*Shallowest depth to wet zone:* At the surface (April, May, November)

*Deepest depth to wet zone:* More than 6.7 feet (August)

*Months in which ponding does not occur:* January, February, March, June, July, August, September, October, December

*Deepest ponding:* 0.5 foot (April, May, November)

*Available water capacity to a depth of 60 inches:* 10.6 inches

*Content of organic matter in the upper 10 inches:* 21.3 percent

*Typical profile:*

Oa—0 to 3 inches; muck  
 Eg—3 to 17 inches; silt loam  
 Btg—17 to 37 inches; silt loam  
 2C—37 to 56 inches; stratified sandy loam to gravelly loam  
 3Cd—56 to 80 inches; loamy sand

***Minor Dissimilar Components*****Cathro soils**

*Extent:* 0 to 15 percent of the mapped areas

**Parkfalls soils**

*Extent:* 0 to 10 percent of the mapped areas

**Stinnett soils**

*Extent:* 0 to 10 percent of the mapped areas

## 771A—Lenroot loamy sand, 0 to 3 percent slopes

### *Component Description*

#### **Lenroot and similar soils**

*Extent:* 75 to 95 percent of the mapped areas

*Geomorphic setting:* Outwash plains; stream terraces

*Position on the landform:* Footslopes

*Slope range:* 0 to 3 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Moderately well drained

*Parent material:* Sandy and gravelly outwash

*Flooding:* None

*Shallowest depth to wet zone:* 2.0 feet (April)

*Deepest depth to wet zone:* 5.0 feet (February, August)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 2.8 inches

*Content of organic matter in the upper 10 inches:* 0.5 percent

*Typical profile:*

A—0 to 4 inches; loamy sand

Bw1—4 to 8 inches; loamy sand

Bw2—8 to 14 inches; loamy coarse sand

BC—14 to 21 inches; gravelly coarse sand

C—21 to 80 inches; stratified coarse sand to gravelly coarse sand

### *Minor Dissimilar Components*

#### **Mahtomedi soils**

*Extent:* 5 to 15 percent of the mapped areas

#### **Meehan soils**

*Extent:* 0 to 10 percent of the mapped areas

## 827A—Scoba sandy loam, 0 to 3 percent slopes

### *Component Description*

#### **Scoba and similar soils**

*Extent:* 70 to 100 percent of the mapped areas

*Geomorphic setting:* Outwash plains; stream terraces; lake plains

*Position on the landform:* Summits

*Slope range:* 0 to 3 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Moderately well drained

*Parent material:* Loamy alluvium underlain by stratified sandy and gravelly outwash

*Flooding:* None

*Shallowest depth to wet zone:* 2.0 feet (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, July, August, September, October, November, December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.8 inches

*Content of organic matter in the upper 10 inches:* 2.3 percent

*Typical profile:*

Ap—0 to 9 inches; sandy loam

E/B—9 to 16 inches; sandy loam  
 B/E—16 to 20 inches; sandy loam  
 Bt—20 to 26 inches; sandy loam  
 2Bt—26 to 31 inches; loamy sand  
 2C—31 to 60 inches; stratified sand to very gravelly coarse sand

### ***Minor Dissimilar Components***

#### **Rosholt soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Aftad soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Plover soils**

*Extent:* 0 to 5 percent of the mapped areas

#### **Oesterle soils**

*Extent:* 0 to 5 percent of the mapped areas

## **853C—Frogcreek-Stinnett-Wozny complex, 0 to 15 percent slopes, very stony**

### ***Component Description***

#### **Frogcreek and similar soils**

*Extent:* 35 to 70 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Shoulders and backslopes

*Slope range:* 2 to 15 percent

*Depth to restrictive layer(s):* 40 to 60 inches to dense material

*Drainage class:* Moderately well drained

*Parent material:* Mantle of loess or silty alluvium and loamy alluvium underlain by dense sandy till

*Flooding:* None

*Shallowest depth to wet zone:* 1.0 foot (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, June, July, August, September)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 7.4 inches

*Content of organic matter in the upper 10 inches:* 2.1 percent

*Typical profile:*

A—0 to 4 inches; silt loam  
 E—4 to 13 inches; silt loam  
 2B/E—13 to 19 inches; loam  
 2Bt1—19 to 32 inches; sandy loam  
 2Bt2—32 to 46 inches; gravelly sandy loam  
 3Cd—46 to 80 inches; gravelly loamy sand

#### **Stinnett and similar soils**

*Extent:* 15 to 50 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Footslopes

*Slope range:* 0 to 4 percent

*Depth to restrictive layer(s):* 40 to 60 inches to dense material

*Drainage class:* Somewhat poorly drained

*Parent material:* Mantle of loess or silty alluvium and loamy alluvium underlain by dense sandy till

*Flooding:* None

*Shallowest depth to wet zone:* 0.5 foot (April)

*Deepest depth to wet zone:* More than 6.7 feet (July, August)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 9.6 inches

*Content of organic matter in the upper 10 inches:* 1.4 percent

*Typical profile:*

A—0 to 4 inches; silt loam

E—4 to 7 inches; silt

E/B—7 to 18 inches; silt

B/E—18 to 29 inches; silt loam

2Bt1—29 to 34 inches; loam

2Bt2—34 to 41 inches; sandy loam

3C—41 to 55 inches; loamy sand

3Cd—55 to 80 inches; loamy sand

### **Wozny soils**

*Extent:* 15 to 30 percent of the mapped areas

*Geomorphic setting:* Depressions on disintegration moraines

*Slope range:* 0 to 2 percent

*Depth to restrictive layer(s):* 40 to 60 inches to dense material

*Drainage class:* Very poorly drained

*Parent material:* Mantle of loess or silty alluvium and loamy alluvium underlain by dense sandy till

*Flooding:* None

*Shallowest depth to wet zone:* At the surface (April, May, November)

*Deepest depth to wet zone:* More than 6.7 feet (August)

*Months in which ponding does not occur:* January, February, March, June, July, August, September, October, December

*Deepest ponding:* 0.5 foot (April, May, November)

*Available water capacity to a depth of 60 inches:* 10.6 inches

*Content of organic matter in the upper 10 inches:* 21.3 percent

*Typical profile:*

Oa—0 to 3 inches; muck

Eg—3 to 17 inches; silt loam

Btg—17 to 37 inches; silt loam

2C—37 to 56 inches; stratified sandy loam to gravelly loam

3Cd—56 to 80 inches; loamy sand

### ***Minor Dissimilar Components***

#### **Stanberry soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Cathro soils**

*Extent:* 0 to 5 percent of the mapped areas

## **856B—Stinnett silt loam, 0 to 4 percent slopes, very stony**

### ***Component Description***

#### **Stinnett and similar soils**

*Extent:* 70 to 100 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines



*Position on the landform:* Footslopes

*Slope range:* 0 to 4 percent

*Depth to restrictive layer(s):* 40 to 60 inches to dense material

*Drainage class:* Somewhat poorly drained

*Parent material:* Mantle of loess or silty alluvium and loamy alluvium underlain by dense sandy till

*Flooding:* None

*Shallowest depth to wet zone:* 0.5 foot (April)

*Deepest depth to wet zone:* More than 6.7 feet (July, August)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 9.6 inches

*Content of organic matter in the upper 10 inches:* 1.4 percent

*Typical profile:*

A—0 to 4 inches; silt loam

E—4 to 7 inches; silt

E/B—7 to 18 inches; silt

B/E—18 to 29 inches; silt loam

2Bt1—29 to 34 inches; loam

2Bt2—34 to 41 inches; sandy loam

3C—41 to 55 inches; loamy sand

3Cd—55 to 80 inches; loamy sand

### ***Minor Dissimilar Components***

#### **Frogcreek soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Wozny soils**

*Extent:* 0 to 15 percent of the mapped areas

## **857B—Frogcreek silt loam, 2 to 6 percent slopes, very stony**

### ***Component Description***

#### **Frogcreek and similar soils**

*Extent:* 75 to 100 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Footslopes and summits

*Slope range:* 2 to 6 percent

*Depth to restrictive layer(s):* 40 to 60 inches to dense material

*Drainage class:* Moderately well drained

*Parent material:* Mantle of loess or silty alluvium and loamy alluvium underlain by dense sandy till

*Flooding:* None

*Shallowest depth to wet zone:* 1.0 foot (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, June, July, August, September)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 7.4 inches

*Content of organic matter in the upper 10 inches:* 2.1 percent

*Typical profile:*

A—0 to 4 inches; silt loam

E—4 to 13 inches; silt loam

2B/E—13 to 19 inches; loam  
 2Bt1—19 to 32 inches; sandy loam  
 2Bt2—32 to 46 inches; gravelly sandy loam  
 3Cd—46 to 80 inches; gravelly loamy sand

### ***Minor Dissimilar Components***

#### **Stinnett soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Stanberry soils**

*Extent:* 0 to 5 percent of the mapped areas

#### **Wozny soils**

*Extent:* 0 to 5 percent of the mapped areas

## **857C—Frogcreek silt loam, 6 to 15 percent slopes, very stony**

### ***Component Description***

#### **Frogcreek and similar soils**

*Extent:* 80 to 100 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Shoulders and backslopes

*Slope range:* 6 to 15 percent

*Depth to restrictive layer(s):* 40 to 60 inches to dense material

*Drainage class:* Moderately well drained

*Parent material:* Mantle of loess or silty alluvium and loamy alluvium underlain by dense sandy till

*Flooding:* None

*Shallowest depth to wet zone:* 1.0 foot (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, June, July, August, September)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 7.4 inches

*Content of organic matter in the upper 10 inches:* 2.1 percent

*Typical profile:*

A—0 to 4 inches; silt loam  
 E—4 to 13 inches; silt loam  
 2B/E—13 to 19 inches; loam  
 2Bt1—19 to 32 inches; sandy loam  
 2Bt2—32 to 46 inches; gravelly sandy loam  
 3Cd—46 to 80 inches; gravelly loamy sand

### ***Minor Dissimilar Components***

#### **Stinnett soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Stanberry soils**

*Extent:* 0 to 7 percent of the mapped areas

#### **Wozny soils**

*Extent:* 0 to 3 percent of the mapped areas

## **873B—Stanberry sandy loam, 1 to 6 percent slopes, very stony**

### ***Component Description***

#### **Stanberry and similar soils**

*Extent:* 75 to 100 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Summits

*Slope range:* 1 to 6 percent

*Depth to restrictive layer(s):* 40 to 60 inches to dense material

*Drainage class:* Moderately well drained

*Parent material:* Loamy alluvium underlain by dense sandy till

*Flooding:* None

*Shallowest depth to wet zone:* 2.0 feet (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, March, June, July, August, September, October, December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 6.1 inches

*Content of organic matter in the upper 10 inches:* 1.2 percent

*Typical profile:*

Oa—0 to 1 inch; highly decomposed plant material

E—1 to 3 inches; sandy loam

Bs—3 to 19 inches; sandy loam

E/B—19 to 24 inches; sandy loam

B/E—24 to 32 inches; sandy loam

2BC—32 to 42 inches; loamy sand

2Cd—42 to 80 inches; loamy sand

### ***Minor Dissimilar Components***

#### **Springstead soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Frogcreek soils**

*Extent:* 0 to 5 percent of the mapped areas

#### **Parkfalls soils**

*Extent:* 0 to 5 percent of the mapped areas

#### **Stinnett soils**

*Extent:* 0 to 5 percent of the mapped areas

#### **Wozny soils**

*Extent:* 0 to 5 percent of the mapped areas

## **873C—Stanberry sandy loam, 6 to 15 percent slopes, very stony**

### ***Component Description***

#### **Stanberry and similar soils**

*Extent:* 65 to 95 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Shoulders and backslopes

*Slope range:* 6 to 15 percent

*Depth to restrictive layer(s):* 40 to 60 inches to dense material

*Drainage class:* Moderately well drained

*Parent material:* Loamy alluvium underlain by dense sandy till

*Flooding:* None

*Shallowest depth to wet zone:* 2.0 feet (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, March, June, July, August, September, October, December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 6.1 inches

*Content of organic matter in the upper 10 inches:* 1.2 percent

*Typical profile:*

Oa—0 to 1 inch; highly decomposed plant material

E—1 to 3 inches; sandy loam

Bs—3 to 19 inches; sandy loam

E/B—19 to 24 inches; sandy loam

B/E—24 to 32 inches; sandy loam

2BC—32 to 42 inches; loamy sand

2Cd—42 to 80 inches; loamy sand

### ***Minor Dissimilar Components***

#### **Keweenaw soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Springstead soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Beaverbay soils**

*Extent:* 0 to 5 percent of the mapped areas

#### **Frogcreek soils**

*Extent:* 0 to 5 percent of the mapped areas

#### **Parkfalls soils**

*Extent:* 0 to 5 percent of the mapped areas

#### **Stinnett soils**

*Extent:* 0 to 5 percent of the mapped areas

#### **Wozny soils**

*Extent:* 0 to 5 percent of the mapped areas

## **873D—Stanberry sandy loam, 15 to 30 percent slopes, very stony**

### ***Component Description***

#### **Stanberry and similar soils**

*Extent:* 65 to 95 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Shoulders and backslopes

*Slope range:* 15 to 30 percent

*Depth to restrictive layer(s):* 40 to 60 inches to dense material

*Drainage class:* Moderately well drained

*Parent material:* Loamy alluvium underlain by dense sandy till

*Flooding:* None

*Shallowest depth to wet zone:* 2.0 feet (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, March, June, July, August, September, October, December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 6.1 inches

*Content of organic matter in the upper 10 inches:* 1.2 percent

*Typical profile:*

Oa—0 to 1 inch; highly decomposed plant material

E—1 to 3 inches; sandy loam

Bs—3 to 19 inches; sandy loam

E/B—19 to 24 inches; sandy loam

B/E—24 to 32 inches; sandy loam

2BC—32 to 42 inches; loamy sand

2Cd—42 to 80 inches; loamy sand

### ***Minor Dissimilar Components***

#### **Keweenaw soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Padus soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Beaverbay soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Frogcreek soils**

*Extent:* 0 to 10 percent of the mapped areas

## **905A—Cublake loamy sand, 0 to 3 percent slopes**

### ***Component Description***

#### **Cublake and similar soils**

*Extent:* 65 to 100 percent of the mapped areas

*Geomorphic setting:* Lake plains

*Position on the landform:* Footslopes

*Slope range:* 0 to 3 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Moderately well drained

*Parent material:* Sandy outwash underlain by stratified silty, loamy, and sandy lacustrine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 2.5 feet (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, March, August, September, October, December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 5.7 inches

*Content of organic matter in the upper 10 inches:* 0.6 percent

*Typical profile:*

A—0 to 3 inches; loamy sand

E—3 to 4 inches; loamy sand

Bs—4 to 23 inches; loamy sand

BC—23 to 32 inches; sand

C1—32 to 40 inches; sand

C2—40 to 48 inches; fine sand

2C3—48 to 60 inches; stratified very fine sandy loam to silt loam

### ***Minor Dissimilar Components***

#### **Flink soils**

*Extent:* 0 to 10 percent of the mapped areas

**Annalake soils**

*Extent:* 0 to 10 percent of the mapped areas

**Croswell soils**

*Extent:* 0 to 10 percent of the mapped areas

**Chinwhisker soils**

*Extent:* 0 to 5 percent of the mapped areas

**926A—Flink loamy sand, 0 to 3 percent slopes*****Component Description*****Flink and similar soils**

*Extent:* 75 to 100 percent of the mapped areas

*Geomorphic setting:* Lake plains

*Position on the landform:* Footslopes

*Slope range:* 0 to 3 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Somewhat poorly drained

*Parent material:* Sandy outwash deposits underlain by stratified silty, loamy, and sandy lacustrine deposits

*Flooding:* None

*Shallowest depth to wet zone:* 1.0 foot (April)

*Deepest depth to wet zone:* 4.0 feet (August)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 5.5 inches

*Content of organic matter in the upper 10 inches:* 0.6 percent

*Typical profile:*

A—0 to 3 inches; loamy sand

E—3 to 6 inches; sand

Bhs—6 to 9 inches; sand

Bs—9 to 26 inches; sand

BC—26 to 35 inches; sand

C—35 to 46 inches; sand

2Cg—46 to 52 inches; stratified silt to silty clay loam

2C—52 to 80 inches; stratified silt to silty clay loam to loamy very fine sand

***Minor Dissimilar Components*****Cublake soils**

*Extent:* 0 to 15 percent of the mapped areas

**Au Gres soils**

*Extent:* 0 to 10 percent of the mapped areas

**Kinross soils**

*Extent:* 0 to 10 percent of the mapped areas

**943D—Stanberry, very stony-Greenwood complex, 0 to 35 percent slopes*****Component Description*****Stanberry and similar soils**

*Extent:* 30 to 80 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Shoulders and backslopes

*Slope range:* 6 to 30 percent

*Depth to restrictive layer(s):* 40 to 60 inches to dense material

*Drainage class:* Moderately well drained

*Parent material:* Loamy alluvium underlain by dense sandy till

*Flooding:* None

*Shallowest depth to wet zone:* 2.0 feet (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, March, June, July, August, September, October, December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 5.8 inches

*Content of organic matter in the upper 10 inches:* 1.2 percent

*Typical profile:*

Oa—0 to 1 inch; highly decomposed plant material

E—1 to 3 inches; sandy loam

Bs—3 to 19 inches; sandy loam

E/B—19 to 24 inches; sandy loam

B/E—24 to 32 inches; sandy loam

2BC—32 to 42 inches; loamy sand

2Cd—42 to 80 inches; loamy sand

#### **Greenwood and similar soils**

*Extent:* 15 to 30 percent of the mapped areas

*Geomorphic setting:* Depressions on disintegration moraines

*Slope range:* 0 to 1 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Very poorly drained

*Parent material:* Organic deposits more than 51 inches thick

*Flooding:* None

*Shallowest depth to wet zone:* At the surface (April, May, June, October, November)

*Deepest depth to wet zone:* 1.0 foot (January, February)

*Months in which ponding does not occur:* January, February, March, May, June, July, August, September, October, November, December

*Deepest ponding:* 0.5 foot (April)

*Available water capacity to a depth of 60 inches:* 30.5 inches

*Content of organic matter in the upper 10 inches:* 65.0 percent

*Typical profile:*

Oi—0 to 6 inches; peat

Oe—6 to 60 inches; mucky peat

#### ***Minor Dissimilar Components***

#### **Frogcreek soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Sarona soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Wozny soils**

*Extent:* 0 to 10 percent of the mapped areas

### **948A—Billyboy silt loam, 0 to 3 percent slopes**

#### ***Component Description***

#### **Billyboy and similar soils**

*Extent:* 80 to 100 percent of the mapped areas



*Geomorphic setting:* Stream terraces; outwash plains

*Position on the landform:* Footslopes

*Slope range:* 0 to 3 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Moderately well drained

*Parent material:* Loess or silty alluvium underlain by sandy and gravelly outwash

*Flooding:* None

*Shallowest depth to wet zone:* 1.5 feet (April)

*Deepest depth to wet zone:* 5.5 feet (February, August)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 7.1 inches

*Content of organic matter in the upper 10 inches:* 1.4 percent

*Typical profile:*

A—0 to 4 inches; silt loam

E—4 to 11 inches; silt loam

E/B—11 to 20 inches; silt loam

2B/E—20 to 26 inches; loam

2Bt—26 to 30 inches; sandy loam

3Bt—30 to 35 inches; loamy sand

3C—35 to 60 inches; stratified sand to very gravelly coarse sand

### ***Minor Dissimilar Components***

#### **Ossmer soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Antigo soils**

*Extent:* 0 to 5 percent of the mapped areas

#### **Sconsin soils**

*Extent:* 0 to 5 percent of the mapped areas

## **970C—Keweenaw, stony-Pence, stony-Greenwood complex, 0 to 15 percent slopes**

### ***Component Description***

#### **Keweenaw and similar soils**

*Extent:* 30 to 60 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Shoulders and backslopes

*Slope range:* 6 to 15 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Well drained

*Parent material:* Sandy till

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 5.8 inches

*Content of organic matter in the upper 10 inches:* 0.6 percent

*Typical profile:*

A—0 to 2 inches; sandy loam

E—2 to 4 inches; sandy loam

Bs1,Bs2—4 to 16 inches; sandy loam

Bs3—16 to 20 inches; loamy sand

E'—20 to 27 inches; loamy sand

E/B—27 to 43 inches; sand  
 B/E—43 to 75 inches; loamy sand  
 C—75 to 80 inches; loamy sand

#### **Pence and similar soils**

*Extent:* 15 to 40 percent of the mapped areas  
*Geomorphic setting:* Disintegration moraines  
*Position on the landform:* Shoulders and backslopes  
*Slope range:* 6 to 15 percent  
*Depth to restrictive layer(s):* More than 80 inches  
*Drainage class:* Somewhat excessively drained  
*Parent material:* Mostly loamy alluvium underlain by stratified sandy and gravelly outwash  
*Flooding:* None  
*Depth to wet zone:* More than 6.7 feet all year  
*Ponding:* None  
*Available water capacity to a depth of 60 inches:* 4.0 inches  
*Content of organic matter in the upper 10 inches:* 1.3 percent  
*Typical profile:*  
     A—0 to 3 inches; sandy loam  
     E—3 to 8 inches; sandy loam  
     Bs—8 to 15 inches; gravelly sandy loam  
     2BC—15 to 21 inches; gravelly coarse sand  
     2C—21 to 60 inches; stratified sand to very gravelly coarse sand

#### **Greenwood and similar soils**

*Extent:* 10 to 20 percent of the mapped areas  
*Geomorphic setting:* Depressions on disintegration moraines  
*Slope range:* 0 to 1 percent  
*Depth to restrictive layer(s):* More than 80 inches  
*Drainage class:* Very poorly drained  
*Parent material:* Organic deposits more than 51 inches thick  
*Flooding:* None  
*Shallowest depth to wet zone:* At the surface (April, May, June, October, November)  
*Deepest depth to wet zone:* 1.0 foot (January, February)  
*Months in which ponding does not occur:* January, February, March, May, June, July, August, September, October, November, December  
*Deepest ponding:* 0.5 foot (April)  
*Available water capacity to a depth of 60 inches:* 30.5 inches  
*Content of organic matter in the upper 10 inches:* 65.0 percent  
*Typical profile:*  
     Oi—0 to 6 inches; peat  
     Oe—6 to 60 inches; mucky peat

### ***Minor Dissimilar Components***

#### **Haugen soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Aftad soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Rosholt soils**

*Extent:* 0 to 15 percent of the mapped areas

## **970E—Keweenaw, stony-Pence, stony-Greenwood complex, 0 to 45 percent slopes**

### ***Component Description***

#### **Keweenaw and similar soils**

*Extent:* 30 to 60 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Shoulders and backslopes

*Slope range:* 15 to 45 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Well drained

*Parent material:* Sandy till

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 5.8 inches

*Content of organic matter in the upper 10 inches:* 0.6 percent

*Typical profile:*

A—0 to 2 inches; sandy loam

E—2 to 4 inches; sandy loam

Bs1,Bs2—4 to 16 inches; sandy loam

Bs3—16 to 20 inches; loamy sand

E'—20 to 27 inches; loamy sand

E/B—27 to 43 inches; sand

B/E—43 to 75 inches; loamy sand

C—75 to 80 inches; loamy sand

#### **Pence and similar soils**

*Extent:* 15 to 50 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Shoulders and backslopes

*Slope range:* 15 to 45 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Somewhat excessively drained

*Parent material:* Mostly loamy alluvium underlain by stratified sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.0 inches

*Content of organic matter in the upper 10 inches:* 1.3 percent

*Typical profile:*

A—0 to 3 inches; sandy loam

E—3 to 8 inches; sandy loam

Bs—8 to 15 inches; gravelly sandy loam

2BC—15 to 21 inches; gravelly coarse sand

2C—21 to 60 inches; stratified sand to very gravelly coarse sand

#### **Greenwood and similar soils**

*Extent:* 10 to 20 percent of the mapped areas

*Geomorphic setting:* Depressions on disintegration moraines

*Slope range:* 0 to 1 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Very poorly drained

*Parent material:* Organic deposits more than 51 inches thick

*Flooding:* None

*Shallowest depth to wet zone:* At the surface (April, May, June, October, November)

*Deepest depth to wet zone:* 1.0 foot (January, February)

*Months in which ponding does not occur:* January, February, March, May, June, July, August, September, October, November, December

*Deepest ponding:* 0.5 foot (April)

*Available water capacity to a depth of 60 inches:* 30.5 inches

*Content of organic matter in the upper 10 inches:* 65.0 percent

*Typical profile:*

Oi—0 to 6 inches; peat

Oe—6 to 60 inches; mucky peat

### ***Minor Dissimilar Components***

#### **Amery soils**

*Extent:* 0 to 20 percent of the mapped areas

#### **Aftad soils**

*Extent:* 0 to 10 percent of the mapped areas

## **1070C—Fremstadt, stony-Cress complex, 6 to 15 percent slopes**

### ***Component Description***

#### **Fremstadt and similar soils**

*Extent:* 30 to 70 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Shoulders and backslopes

*Slope range:* 6 to 15 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Well drained

*Parent material:* Sandy till or sandy mudflow sediments

*Flooding:* None

*Depth to wet zone:* More than 6.0 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 5.5 inches

*Content of organic matter in the upper 10 inches:* 1.2 percent

*Typical profile:*

A—0 to 5 inches; sandy loam

Bw—5 to 33 inches; loamy sand

B/E1—33 to 37 inches; sandy loam

B/E2—37 to 45 inches; loamy sand

BC—45 to 70 inches; loamy sand

C—70 to 80 inches; loamy sand

#### **Cress and similar soils**

*Extent:* 15 to 40 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Shoulders and backslopes

*Slope range:* 6 to 12 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Somewhat excessively drained

*Parent material:* Thin layer of loamy alluvium underlain by stratified sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.3 inches

*Content of organic matter in the upper 10 inches:* 0.9 percent

*Typical profile:*

A—0 to 3 inches; sandy loam

Bw1—3 to 15 inches; sandy loam

2Bw2—15 to 31 inches; loamy sand

2Bw3—31 to 36 inches; gravelly loamy sand

2C—36 to 60 inches; stratified sand to very gravelly coarse sand

### ***Minor Dissimilar Components***

#### **Fremstadt soils that are not stony**

*Extent:* 0 to 30 percent of the mapped areas

#### **Haugen soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Spoonerhill soils that are stony**

*Extent:* 0 to 15 percent of the mapped areas

#### **Mahtomedi soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Spoonerhill soils**

*Extent:* 0 to 10 percent of the mapped areas

## **1070D—Fremstadt, stony-Cress complex, 15 to 30 percent slopes**

### ***Component Description***

#### **Fremstadt and similar soils**

*Extent:* 40 to 80 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Shoulders and backslopes

*Slope range:* 15 to 30 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Well drained

*Parent material:* Sandy till or sandy mudflow sediments

*Flooding:* None

*Depth to wet zone:* More than 6.0 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 5.5 inches

*Content of organic matter in the upper 10 inches:* 1.2 percent

*Typical profile:*

A—0 to 5 inches; sandy loam

Bw—5 to 33 inches; loamy sand

B/E1—33 to 37 inches; sandy loam

B/E2—37 to 45 inches; loamy sand

BC—45 to 70 inches; loamy sand

C—70 to 80 inches; loamy sand

**Cress and similar soils**

*Extent:* 20 to 50 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Shoulders and backslopes

*Slope range:* 12 to 30 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Somewhat excessively drained

*Parent material:* Thin layer of loamy alluvium underlain by stratified sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.3 inches

*Content of organic matter in the upper 10 inches:* 0.9 percent

*Typical profile:*

A—0 to 3 inches; sandy loam

Bw1—3 to 15 inches; sandy loam

2Bw2—15 to 31 inches; loamy sand

2Bw3—31 to 36 inches; gravelly loamy sand

2C—36 to 60 inches; stratified sand to very gravelly coarse sand

***Minor Dissimilar Components*****Mahtomedi soils**

*Extent:* 0 to 15 percent of the mapped areas

**Amery soils**

*Extent:* 0 to 10 percent of the mapped areas

**Rosholt soils**

*Extent:* 0 to 10 percent of the mapped areas

**1080B—Spoonerhill-Spoonerhill, stony-Cress complex, 1 to 6 percent slopes*****Component Description*****Spoonerhill and similar soils**

*Extent:* 5 to 80 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Summits

*Slope range:* 2 to 6 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Moderately well drained

*Parent material:* Thin mantle of loamy alluvium and sandy alluvium underlain by sandy till or sandy mudflow sediments

*Flooding:* None

*Shallowest depth to wet zone:* 2.0 feet (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, March, June, July, August, September, October, December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.3 inches

*Content of organic matter in the upper 10 inches:* 1.0 percent

*Typical profile:*

A—0 to 3 inches; sandy loam

Bw1—3 to 12 inches; gravelly sandy loam

2Bw2—12 to 16 inches; gravelly loamy sand

2E/B—16 to 34 inches; loamy sand

2C1—34 to 46 inches; sand

2C2—46 to 80 inches; gravelly loamy sand

#### **Spoonerhill, stony, and similar soils**

*Extent:* 5 to 80 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Summits

*Slope range:* 2 to 6 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Moderately well drained

*Parent material:* Thin mantle of loamy alluvium and sandy alluvium underlain by sandy till or sandy mudflow sediments

*Flooding:* None

*Shallowest depth to wet zone:* 2.0 feet (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, March, June, July, August, September, October, December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.3 inches

*Content of organic matter in the upper 10 inches:* 1.0 percent

*Typical profile:*

A—0 to 3 inches; sandy loam

Bw1—3 to 12 inches; gravelly sandy loam

2Bw2—12 to 16 inches; gravelly loamy sand

2E/B—16 to 34 inches; loamy sand

2C1—34 to 46 inches; sand

2C2—46 to 80 inches; gravelly loamy sand

#### **Cress and similar soils**

*Extent:* 15 to 35 percent of the mapped areas

*Geomorphic setting:* Outwash plains; stream terraces

*Position on the landform:* Summits

*Slope range:* 1 to 6 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Somewhat excessively drained

*Parent material:* Thin layer of loamy alluvium underlain by stratified sandy and gravelly outwash

*Flooding:* None

*Depth to wet zone:* More than 6.7 feet all year

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.3 inches

*Content of organic matter in the upper 10 inches:* 0.9 percent

*Typical profile:*

A—0 to 3 inches; sandy loam

Bw1—3 to 15 inches; sandy loam

2Bw2—15 to 31 inches; loamy sand

2Bw3—31 to 36 inches; gravelly loamy sand

2C—36 to 60 inches; stratified sand to very gravelly coarse sand

### **Minor Dissimilar Components**

#### **Fremstadt soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Grettum soils**

*Extent:* 0 to 10 percent of the mapped areas



## **1653C—Stanberry-Parkfalls-Wozny complex, 0 to 15 percent slopes, very stony**

### ***Component Description***

#### **Stanberry and similar soils**

*Extent:* 30 to 60 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Shoulders and backslopes

*Slope range:* 2 to 15 percent

*Depth to restrictive layer(s):* 40 to 60 inches to dense material

*Drainage class:* Moderately well drained

*Parent material:* Loamy alluvium underlain by dense sandy till

*Flooding:* None

*Shallowest depth to wet zone:* 2.0 feet (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, March, June, July, August, September, October, December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 6.1 inches

*Content of organic matter in the upper 10 inches:* 1.2 percent

*Typical profile:*

Oa—0 to 1 inch; highly decomposed plant material

E—1 to 3 inches; sandy loam

Bs—3 to 19 inches; sandy loam

E/B—19 to 24 inches; sandy loam

B/E—24 to 32 inches; sandy loam

2BC—32 to 42 inches; loamy sand

2Cd—42 to 80 inches; loamy sand

#### **Parkfalls and similar soils**

*Extent:* 15 to 45 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Footslopes

*Slope range:* 0 to 4 percent

*Depth to restrictive layer(s):* 30 to 50 inches to dense material

*Drainage class:* Somewhat poorly drained

*Parent material:* Loamy alluvium underlain by dense sandy till

*Flooding:* None

*Shallowest depth to wet zone:* 0.5 foot (April)

*Deepest depth to wet zone:* More than 6.7 feet (July, August)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 5.5 inches

*Content of organic matter in the upper 10 inches:* 1.4 percent

*Typical profile:*

A—0 to 5 inches; sandy loam

E—5 to 8 inches; sandy loam

Bs—8 to 17 inches; sandy loam

E/B—17 to 30 inches; sandy loam

Bt—30 to 33 inches; sandy loam

BCd—33 to 48 inches; sandy loam

2Cd—48 to 80 inches; loamy sand

#### **Wozny and similar soils**

*Extent:* 10 to 20 percent of the mapped areas

*Geomorphic setting:* Depressions on disintegration moraines

*Slope range:* 0 to 2 percent

*Depth to restrictive layer(s):* 40 to 60 inches to dense material

*Drainage class:* Very poorly drained

*Parent material:* Mantle of loess or silty alluvium and loamy alluvium underlain by dense sandy till

*Flooding:* None

*Shallowest depth to wet zone:* At the surface (April, May, November)

*Deepest depth to wet zone:* More than 6.7 feet (August)

*Months in which ponding does not occur:* January, February, March, June, July, August, September, October, December

*Deepest ponding:* 0.5 foot (April, May, November)

*Available water capacity to a depth of 60 inches:* 10.6 inches

*Content of organic matter in the upper 10 inches:* 21.3 percent

*Typical profile:*

Oa—0 to 3 inches; muck

Eg—3 to 17 inches; silt loam

Btg—17 to 37 inches; silt loam

2C—37 to 56 inches; stratified sandy loam to gravelly loam

3Cd—56 to 80 inches; loamy sand

### ***Minor Dissimilar Components***

#### **Frogcreek soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Cathro soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Keweenaw soils**

*Extent:* 0 to 10 percent of the mapped areas

## **2015—Pits**

### ***Component Description***

#### **Pits**

*Extent:* 100 percent of the mapped areas

*Geomorphic setting:* Stream terraces; outwash plains; moraines; eskers

*Flooding:* None

*Ponding:* None

This map unit consists of open excavations from which sand, gravel, or loamy material has been removed. Most pits are in areas of outwash, but some are in areas of till. Some pits are still in use. Others are no longer used and have been reclaimed or are covered by brush and weeds. Some pits contain water. Because of the variability of this map unit, interpretations for specific uses are not available. Onsite investigation is needed.

## **2050—Landfill**

### ***Component Description***

#### **Landfill**

*Extent:* 100 percent of the mapped areas

This map unit consists of areas of accumulated waste products of human habitation. The areas can be above or below natural ground level. Because of the

variability of this map unit, interpretations for specific uses are not available. Onsite investigation is needed.

### **3011A—Barronett silt loam, 0 to 2 percent slopes**

#### ***Component Description***

##### **Barronett and similar soils**

*Extent:* 75 to 100 percent of the mapped areas

*Geomorphic setting:* Depressions on lake plains; drainageways on stream terraces

*Slope range:* 0 to 2 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Poorly drained

*Parent material:* Mostly silty lacustrine deposits

*Flooding:* None

*Shallowest depth to wet zone:* At the surface (April, May, June, October, November)

*Deepest depth to wet zone:* 5.5 feet (February)

*Months in which ponding does not occur:* January, February, March, June, July, August, September, October, November, December

*Deepest ponding:* 0.5 foot (April, May)

*Available water capacity to a depth of 60 inches:* 11.5 inches

*Content of organic matter in the upper 10 inches:* 6.1 percent

*Typical profile:*

Ap—0 to 9 inches; silt loam

Eg—9 to 16 inches; silt loam

Btg—16 to 34 inches; silt loam

Cg—34 to 60 inches; stratified silt loam to very fine sand

#### ***Minor Dissimilar Components***

##### **Cathro soils**

*Extent:* 0 to 15 percent of the mapped areas

##### **Comstock soils**

*Extent:* 0 to 10 percent of the mapped areas

### **3125A—Meehan loamy sand, 0 to 2 percent slopes**

#### ***Component Description***

##### **Meehan and similar soils**

*Extent:* 70 to 100 percent of the mapped areas

*Geomorphic setting:* Outwash plains

*Position on the landform:* Footslopes

*Slope range:* 0 to 2 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Somewhat poorly drained

*Parent material:* Sandy outwash

*Flooding:* None

*Shallowest depth to wet zone:* 0.5 foot (April)

*Deepest depth to wet zone:* 4.0 feet (February, August)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 3.5 inches

*Content of organic matter in the upper 10 inches:* 1.0 percent

*Typical profile:*

A—0 to 5 inches; loamy sand

E—5 to 8 inches; sand  
Bw—8 to 28 inches; sand  
C—28 to 60 inches; sand

***Minor Dissimilar Components***

**Newson soils**

*Extent:* 0 to 15 percent of the mapped areas

**Wurtsmith soils**

*Extent:* 0 to 15 percent of the mapped areas

**3126A—Wurtsmith loamy sand, 0 to 3 percent slopes**

***Component Description***

**Wurtsmith and similar soils**

*Extent:* 65 to 100 percent of the mapped areas

*Geomorphic setting:* Outwash plains

*Position on the landform:* Footslopes

*Slope range:* 0 to 3 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Moderately well drained

*Parent material:* Sandy outwash

*Flooding:* None

*Shallowest depth to wet zone:* 2.0 feet (April)

*Deepest depth to wet zone:* 5.0 feet (February, August)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 3.8 inches

*Content of organic matter in the upper 10 inches:* 3.2 percent

*Typical profile:*

Ap—0 to 9 inches; loamy sand

Bw—9 to 37 inches; coarse sand

C—37 to 60 inches; sand

***Minor Dissimilar Components***

**Friendship soils**

*Extent:* 0 to 15 percent of the mapped areas

**Menahga soils**

*Extent:* 0 to 10 percent of the mapped areas

**Slimlake soils**

*Extent:* 0 to 5 percent of the mapped areas

**Meehan soils**

*Extent:* 0 to 5 percent of the mapped areas

**3276A—Au Gres loamy sand, 0 to 3 percent slopes**

***Component Description***

**Au Gres and similar soils**

*Extent:* 75 to 100 percent of the mapped areas

*Geomorphic setting:* Stream terraces; outwash plains

*Position on the landform:* Footslopes

*Slope range:* 0 to 3 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Somewhat poorly drained

*Parent material:* Sandy outwash

*Flooding:* None

*Shallowest depth to wet zone:* 0.5 foot (April)

*Deepest depth to wet zone:* 4.0 feet (February, August)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.8 inches

*Content of organic matter in the upper 10 inches:* 0.8 percent

*Typical profile:*

Oa—0 to 2 inches; highly decomposed plant material

E—2 to 5 inches; loamy sand

Bhs—5 to 8 inches; loamy sand

Bs—8 to 16 inches; loamy sand

BC—16 to 28 inches; sand

C—28 to 60 inches; sand

### ***Minor Dissimilar Components***

#### **Croswell soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Kinross soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Flink soils**

*Extent:* 0 to 5 percent of the mapped areas

#### **Chinwhisker soils**

*Extent:* 0 to 5 percent of the mapped areas

## **3312B—Glendenning, very stony-Glendenning complex, 0 to 4 percent slopes**

### ***Component Description***

#### **Glendenning, very stony, and similar soils**

*Extent:* 20 to 75 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Footslopes

*Slope range:* 0 to 4 percent

*Depth to restrictive layer(s):* 60 to 80 inches to dense material

*Drainage class:* Somewhat poorly drained

*Parent material:* Sandy loam till or mudflow sediments

*Flooding:* None

*Shallowest depth to wet zone:* 0.5 foot (April)

*Deepest depth to wet zone:* More than 6.7 feet (July, August)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 7.8 inches

*Content of organic matter in the upper 10 inches:* 1.1 percent

*Typical profile:*

A—0 to 5 inches; sandy loam

E—5 to 15 inches; sandy loam

E/B—15 to 20 inches; sandy loam

B/E—20 to 26 inches; sandy loam

Bt1—26 to 40 inches; sandy loam

Bt2—40 to 65 inches; sandy loam

Cd—65 to 80 inches; sandy loam

#### **Glendenning and similar soils**

*Extent:* 15 to 75 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Footslopes

*Slope range:* 0 to 4 percent

*Depth to restrictive layer(s):* 60 to 80 inches to dense material

*Drainage class:* Somewhat poorly drained

*Parent material:* Sandy loam till or mudflow sediments

*Flooding:* None

*Shallowest depth to wet zone:* 0.5 foot (April)

*Deepest depth to wet zone:* More than 6.7 feet (July, August)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 7.8 inches

*Content of organic matter in the upper 10 inches:* 1.3 percent

*Typical profile:*

Ap—0 to 7 inches; sandy loam

E—7 to 15 inches; sandy loam

E/B—15 to 20 inches; sandy loam

B/E—20 to 26 inches; sandy loam

Bt1—26 to 40 inches; sandy loam

Bt2—40 to 65 inches; sandy loam

Cd—65 to 80 inches; sandy loam

#### ***Minor Dissimilar Components***

#### **Capitola soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Haugen soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Oesterle soils**

*Extent:* 0 to 5 percent of the mapped areas

#### **Plover soils**

*Extent:* 0 to 5 percent of the mapped areas

### **3336A—Fenander fine sandy loam, 0 to 2 percent slopes**

#### ***Component Description***

#### **Fenander and similar soils**

*Extent:* 80 to 100 percent of the mapped areas

*Geomorphic setting:* Depressions on lake plains; drainageways on stream terraces

*Slope range:* 0 to 2 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Poorly drained

*Parent material:* Stratified loamy and sandy lacustrine deposits

*Flooding:* None

*Shallowest depth to wet zone:* At the surface (March, April, May, June, October, November)

*Deepest depth to wet zone:* 5.5 feet (February)

*Months in which ponding does not occur:* January, February, March, June, July, August, September, October, November, December

*Deepest ponding:* 0.5 foot (April, May)

*Available water capacity to a depth of 60 inches:* 8.4 inches

*Content of organic matter in the upper 10 inches:* 2.4 percent

*Typical profile:*

Ap—0 to 9 inches; fine sandy loam

Eg—9 to 15 inches; fine sandy loam

Btg—15 to 27 inches; loam

BC—27 to 33 inches; fine sandy loam

C—33 to 80 inches; stratified loamy fine sand to fine sandy loam

### ***Minor Dissimilar Components***

#### **Plover soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Cathro soils**

*Extent:* 0 to 5 percent of the mapped areas

## **3403A—Loxley, Beseman, and Dawson soils, 0 to 1 percent slopes**

### ***Component Description***

#### **Loxley and similar soils**

*Extent:* 0 to 100 percent of the mapped areas

*Geomorphic setting:* Depressions on disintegration moraines

*Slope range:* 0 to 1 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Very poorly drained

*Parent material:* Herbaceous organic material more than 51 inches thick

*Flooding:* None

*Shallowest depth to wet zone:* At the surface (April, May, June, October, November)

*Deepest depth to wet zone:* 1.0 foot (January, February)

*Months in which ponding does not occur:* January, February, March, May, June, July, August, September, October, November, December

*Deepest ponding:* 0.5 foot (April)

*Available water capacity to a depth of 60 inches:* 26.5 inches

*Content of organic matter in the upper 10 inches:* 80.0 percent

*Typical profile:*

Oe—0 to 13 inches; mucky peat

Oa—13 to 60 inches; muck

#### **Beseman and similar soils**

*Extent:* 0 to 100 percent of the mapped areas

*Geomorphic setting:* Depressions on disintegration moraines

*Slope range:* 0 to 1 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Very poorly drained

*Parent material:* Herbaceous organic material 16 to 51 inches thick over loamy till

*Flooding:* None

*Shallowest depth to wet zone:* At the surface (April, May, June, October, November)

*Deepest depth to wet zone:* 1.0 foot (January, February)

*Months in which ponding does not occur:* January, February, March, May, June, July, August, September, October, November, December

*Deepest ponding:* 0.5 foot (April)

*Available water capacity to a depth of 60 inches:* 18.2 inches



*Content of organic matter in the upper 10 inches:* 50.0 percent

*Typical profile:*

Oa—0 to 36 inches; muck

Cg—36 to 60 inches; loam

#### **Dawson and similar soils**

*Extent:* 0 to 100 percent of the mapped areas

*Geomorphic setting:* Depressions on disintegration moraines

*Slope range:* 0 to 1 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Very poorly drained

*Parent material:* Sphagnum moss and herbaceous organic material 16 to 51 inches thick over sandy or sandy and gravelly deposits

*Flooding:* None

*Shallowest depth to wet zone:* At the surface (April, May, June, October, November)

*Deepest depth to wet zone:* 0.5 foot (January, February, March, July, August, September, December)

*Months in which ponding does not occur:* January, February, March, May, June, July, August, September, October, November, December

*Deepest ponding:* 0.5 foot (April)

*Available water capacity to a depth of 60 inches:* 18.2 inches

*Content of organic matter in the upper 10 inches:* 75.0 percent

*Typical profile:*

Oi—0 to 8 inches; peat

Oa—8 to 38 inches; muck

A—38 to 40 inches; silt loam

2C—40 to 60 inches; sand

#### ***Minor Dissimilar Components***

#### **Uskabwanka soils**

*Extent:* 0 to 5 percent of the mapped areas

### **3424C—Frogcreek-Magroc-Stinnett complex, 0 to 15 percent slopes, very stony, rocky**

#### ***Component Description***

#### **Frogcreek and similar soils**

*Extent:* 15 to 70 percent of the mapped areas

*Geomorphic setting:* Disintegration moraines

*Position on the landform:* Shoulders and backslopes

*Slope range:* 2 to 15 percent

*Depth to restrictive layer(s):* 40 to 60 inches to dense material

*Drainage class:* Moderately well drained

*Parent material:* Mantle of loess or silty alluvium and loamy alluvium underlain by dense sandy till

*Flooding:* None

*Shallowest depth to wet zone:* 1.0 foot (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, June, July, August, September)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 7.4 inches

*Content of organic matter in the upper 10 inches:* 2.1 percent

*Typical profile:*

- A—0 to 4 inches; silt loam
- E—4 to 13 inches; silt loam
- 2B/E—13 to 19 inches; loam
- 2Bt1—19 to 32 inches; sandy loam
- 2Bt2—32 to 46 inches; gravelly sandy loam
- 3Cd—46 to 80 inches; gravelly loamy sand

**Magroc and similar soils**

- Extent:* 15 to 35 percent of the mapped areas
- Geomorphic setting:* Disintegration moraines
- Position on the landform:* Footslopes
- Slope range:* 0 to 4 percent
- Depth to restrictive layer(s):* 40 to 60 inches to lithic bedrock
- Drainage class:* Somewhat poorly drained
- Parent material:* Loess underlain by loamy glacial till
- Flooding:* None
- Shallowest depth to wet zone:* 0.5 foot (April)
- Deepest depth to wet zone:* More than 6.7 feet (July, August)
- Ponding:* None
- Available water capacity to a depth of 60 inches:* 7.3 inches
- Content of organic matter in the upper 10 inches:* 0.6 percent

*Typical profile:*

- A—0 to 2 inches; silt loam
- E—2 to 11 inches; silt loam
- E/B—11 to 22 inches; silt loam
- 2Bt—22 to 30 inches; sandy loam
- 3C1—30 to 45 inches; gravelly loamy sand
- 3C2—45 to 50 inches; gravelly loamy sand
- 4R—50 to 80 inches; unweathered bedrock

**Stinnett and similar soils**

- Extent:* 15 to 30 percent of the mapped areas
- Geomorphic setting:* Disintegration moraines
- Position on the landform:* Footslopes
- Slope range:* 0 to 4 percent
- Depth to restrictive layer(s):* 40 to 60 inches to dense material
- Drainage class:* Somewhat poorly drained
- Parent material:* Mantle of loess or silty alluvium and loamy alluvium underlain by dense sandy till
- Flooding:* None
- Shallowest depth to wet zone:* 0.5 foot (April)
- Deepest depth to wet zone:* More than 6.7 feet (July, August)
- Ponding:* None
- Available water capacity to a depth of 60 inches:* 9.6 inches
- Content of organic matter in the upper 10 inches:* 1.4 percent

*Typical profile:*

- A—0 to 4 inches; silt loam
- E—4 to 7 inches; silt
- E/B—7 to 18 inches; silt
- B/E—18 to 29 inches; silt loam
- 2Bt1—29 to 34 inches; loam
- 2Bt2—34 to 41 inches; sandy loam

3C—41 to 55 inches; loamy sand  
3Cd—55 to 80 inches; loamy sand

**Rock outcrop**

*Extent:* 1 to 10 percent of the mapped areas  
*Geomorphic setting:* Disintegration moraines  
*Position on the landform:* Summits and shoulders  
*Slope range:* 0 to 10 percent

***Minor Dissimilar Components*****Stanberry soils**

*Extent:* 0 to 5 percent of the mapped areas

**Wozny soils**

*Extent:* 0 to 5 percent of the mapped areas

**3446A—Newson muck, 0 to 2 percent slopes*****Component Description*****Newson and similar soils**

*Extent:* 65 to 100 percent of the mapped areas  
*Geomorphic setting:* Drainageways and depressions on outwash plains and lake plains  
*Slope range:* 0 to 2 percent  
*Depth to restrictive layer(s):* More than 80 inches  
*Drainage class:* Very poorly drained  
*Parent material:* Sandy outwash or sandy lacustrine deposits  
*Flooding:* None  
*Shallowest depth to wet zone:* At the surface (April, May, November)  
*Deepest depth to wet zone:* 2.5 feet (February, August)  
*Months in which ponding does not occur:* January, February, March, June, July, August, September, October, November, December  
*Deepest ponding:* 0.5 foot (April, May)  
*Available water capacity to a depth of 60 inches:* 5.6 inches  
*Content of organic matter in the upper 10 inches:* 25.0 percent  
*Typical profile:*  
Oa—0 to 3 inches; muck  
A—3 to 8 inches; loamy sand  
Bg—8 to 16 inches; sand  
BCg—16 to 22 inches; sand  
C—22 to 60 inches; sand

***Minor Dissimilar Components*****Meehan soils**

*Extent:* 0 to 15 percent of the mapped areas

**Markey soils**

*Extent:* 0 to 10 percent of the mapped areas

**Minocqua soils**

*Extent:* 0 to 5 percent of the mapped areas

### **3448B—Grettum loamy sand, 0 to 6 percent slopes**

#### ***Component Description***

##### **Grettum and similar soils**

*Extent:* 60 to 100 percent of the mapped areas

*Geomorphic setting:* Outwash plains; lake plains

*Position on the landform:* Summits

*Slope range:* 0 to 6 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Moderately well drained

*Parent material:* Sandy outwash or sandy lacustrine deposits with lamellae

*Flooding:* None

*Shallowest depth to wet zone:* 4.5 feet (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, June, July, August, September, October, November, December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.3 inches

*Content of organic matter in the upper 10 inches:* 0.8 percent

*Typical profile:*

A—0 to 3 inches; loamy sand

Bw—3 to 32 inches; sand

E&Bt—32 to 75 inches; sand

C—75 to 80 inches; sand

#### ***Minor Dissimilar Components***

##### **Graycalm soils**

*Extent:* 0 to 15 percent of the mapped areas

##### **Menahga soils**

*Extent:* 0 to 10 percent of the mapped areas

##### **Cress soils**

*Extent:* 0 to 7 percent of the mapped areas

##### **Aftad soils**

*Extent:* 0 to 5 percent of the mapped areas

##### **Karlsborg soils**

*Extent:* 0 to 3 percent of the mapped areas

### **3448C—Grettum loamy sand, 6 to 12 percent slopes**

#### ***Component Description***

##### **Grettum and similar soils**

*Extent:* 65 to 100 percent of the mapped areas

*Geomorphic setting:* Outwash plains; lake plains

*Position on the landform:* Shoulders and backslopes

*Slope range:* 6 to 12 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Moderately well drained

*Parent material:* Sandy outwash or sandy lacustrine deposits with lamellae

*Flooding:* None

*Shallowest depth to wet zone:* 4.5 feet (April)

*Deepest depth to wet zone:* More than 6.7 feet (January, February, June, July, August, September, October, November, December)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.3 inches

*Content of organic matter in the upper 10 inches:* 0.8 percent

*Typical profile:*

A—0 to 3 inches; loamy sand

Bw—3 to 32 inches; sand

E&Bt—32 to 75 inches; sand

C—75 to 80 inches; sand

### ***Minor Dissimilar Components***

#### **Graycalm soils**

*Extent:* 0 to 15 percent of the mapped areas

#### **Menahga soils**

*Extent:* 0 to 10 percent of the mapped areas

#### **Cress soils**

*Extent:* 0 to 6 percent of the mapped areas

#### **Aftad soils**

*Extent:* 0 to 2 percent of the mapped areas

#### **Karlsborg soils**

*Extent:* 0 to 2 percent of the mapped areas

## **3516A—Slimlake sandy loam, 0 to 3 percent slopes**

### ***Component Description***

#### **Slimlake and similar soils**

*Extent:* 55 to 100 percent of the mapped areas

*Geomorphic setting:* Outwash plains; stream terraces

*Position on the landform:* Footslopes

*Slope range:* 0 to 3 percent

*Depth to restrictive layer(s):* More than 80 inches

*Drainage class:* Moderately well drained

*Parent material:* Loamy alluvium over stratified sandy and gravelly outwash

*Flooding:* None

*Shallowest depth to wet zone:* 2.5 feet (April)

*Deepest depth to wet zone:* 5.5 feet (February, August)

*Ponding:* None

*Available water capacity to a depth of 60 inches:* 4.3 inches

*Content of organic matter in the upper 10 inches:* 1.3 percent

*Typical profile:*

A—0 to 6 inches; sandy loam

Bw—6 to 17 inches; sandy loam

2BC—17 to 42 inches; gravelly sand

2C1—42 to 53 inches; gravelly sand

2C2—53 to 80 inches; sand

### ***Minor Dissimilar Components***

#### **Cress soils**

*Extent:* 0 to 15 percent of the mapped areas

**Oesterle soils***Extent:* 0 to 15 percent of the mapped areas**Scott Lake soils***Extent:* 0 to 10 percent of the mapped areas**Spoonerhill soils***Extent:* 0 to 5 percent of the mapped areas**Friendship soils***Extent:* 0 to 3 percent of the mapped areas**3629B—Perida loamy sand, 0 to 4 percent slopes*****Component Description*****Perida and similar soils***Extent:* 70 to 100 percent of the mapped areas*Geomorphic setting:* Lake plains*Position on the landform:* Summits*Slope range:* 0 to 4 percent*Depth to restrictive layer(s):* More than 80 inches*Drainage class:* Moderately well drained*Parent material:* Mantle of sandy outwash or sandy lacustrine deposits over clayey lacustrine deposits underlain by sandy outwash or sandy lacustrine deposits*Flooding:* None*Shallowest depth to wet zone:* 3.5 feet (April)*Deepest depth to wet zone:* More than 6.7 feet (January, February, July, August, September, October, November, December)*Ponding:* None*Available water capacity to a depth of 60 inches:* 4.8 inches*Content of organic matter in the upper 10 inches:* 1.2 percent*Typical profile:*

Ap—0 to 9 inches; loamy sand

Bw1,Bw2,Bw3—9 to 43 inches; sand

Bw4—43 to 45 inches; loamy sand

2Bt1—45 to 60 inches; clay

2Bt2—60 to 74 inches; silty clay

3C—74 to 80 inches; sand

***Minor Dissimilar Components*****Grettum soils***Extent:* 0 to 10 percent of the mapped areas**Stengel soils***Extent:* 0 to 10 percent of the mapped areas**Karlsborg soils***Extent:* 0 to 5 percent of the mapped areas**Meenon soils***Extent:* 0 to 5 percent of the mapped areas

## M-W—Miscellaneous water

- This map unit consists of manmade areas that are used for industrial, sanitary, or mining applications and that contain water most of the year. Included in mapping are narrow dikes that surround the water areas.

## W—Water

- This map unit consists of naturally occurring bodies of water, such as rivers, streams, lakes, reservoirs, and ponds.

Table 2.--Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Acres	Percent
3A	Totagatic-Bowstring-Ausable complex, 0 to 2 percent slopes frequently flooded-----	3,249	0.6
22A	Comstock silt loam, 0 to 3 percent slopes-----	611	0.1
24A	Poskin silt loam, 0 to 3 percent slopes-----	278	*
27A	Scott Lake sandy loam, 0 to 3 percent slopes-----	1,317	0.2
28B	Haugen-Rosholt complex, 2 to 6 percent slopes, very stony-----	2,530	0.5
28C	Haugen-Rosholt complex, 6 to 12 percent slopes, very stony-----	15,077	2.8
33B	Chetek sandy loam, 1 to 6 percent slopes-----	532	*
33C	Chetek sandy loam, 6 to 12 percent slopes-----	703	0.1
38A	Rosholt sandy loam, 0 to 2 percent slopes-----	1,180	0.2
38B	Rosholt sandy loam, 2 to 6 percent slopes-----	3,805	0.7
38C	Rosholt sandy loam, 6 to 12 percent slopes-----	6,704	1.2
38D	Rosholt sandy loam, 12 to 20 percent slopes-----	3,498	0.6
42D	Amery sandy loam, 12 to 25 percent slopes, very stony-----	4,737	0.9
43B	Antigo silt loam, 1 to 6 percent slopes-----	3,476	0.6
43C	Antigo silt loam, 6 to 15 percent slopes-----	1,847	0.3
43D	Antigo silt loam, 15 to 30 percent slopes-----	1,569	0.3
48A	Brill silt loam, 0 to 3 percent slopes-----	514	*
63A	Crystal Lake silt loam, 0 to 2 percent slopes-----	631	0.1
63B	Crystal Lake silt loam, 2 to 6 percent slopes-----	2,064	0.4
63C	Crystal Lake silt loam, 6 to 12 percent slopes-----	362	*
63E	Crystal Lake silt loam, 20 to 35 percent slopes-----	11	*
64A	Totagatic-Winterfield complex, 0 to 2 percent slopes, frequently flooded	1,010	0.2
69B	Keweenaw-Sayner-Vilas complex, 2 to 6 percent slopes, stony-----	1,635	0.3
69C	Keweenaw-Sayner-Vilas complex, 6 to 15 percent slopes, stony-----	11,315	2.1
69E	Keweenaw-Sayner-Vilas complex, 15 to 45 percent slopes, stony-----	15,136	2.8
74B	Vilas loamy sand, 0 to 6 percent slopes-----	429	*
74C	Vilas loamy sand, 6 to 15 percent slopes-----	329	*
74D	Vilas loamy sand, 15 to 30 percent slopes-----	45	*
100B	Menahga sand, 0 to 6 percent slopes-----	9,939	1.8
100C	Menahga sand, 6 to 12 percent slopes-----	13,033	2.4
100D	Menahga sand, 12 to 30 percent slopes-----	9,091	1.7
127D	Amery-Rosholt complex, 12 to 20 percent slopes, very stony-----	8,173	1.5
127E	Amery-Rosholt complex, 20 to 45 percent slopes, very stony-----	4,014	0.7
156B	Magnor, very stony-Magnor complex, 0 to 4 percent slopes-----	3,242	0.6
157B	Freeon, very stony-Freeon complex, 2 to 6 percent slopes-----	7,601	1.4
157C	Freeon, very stony-Freeon complex, 6 to 12 percent slopes-----	6,346	1.2
160A	Oesterle sandy loam, 0 to 2 percent slopes-----	1,668	0.3
182B	Padus sandy loam, 0 to 6 percent slopes-----	89	*
182C	Padus sandy loam, 6 to 15 percent slopes-----	63	*
192A	Worcester sandy loam, 0 to 3 percent slopes-----	379	*
193A	Minocqua muck, 0 to 2 percent slopes-----	816	0.1
215B	Pence sandy loam, 0 to 6 percent slopes-----	140	*
215C	Pence sandy loam, 6 to 15 percent slopes-----	105	*

See footnote at end of table.



Table 2.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Acres	Percent
215D	Pence sandy loam, 15 to 30 percent slopes-----	150	*
315A	Rib silt loam, 0 to 2 percent slopes-----	85	*
337A	Plover fine sandy loam, 0 to 3 percent slopes-----	870	0.2
368B	Mahtomedi-Cress complex, 2 to 6 percent slopes-----	624	0.1
368C	Mahtomedi-Cress complex, 6 to 12 percent slopes-----	978	0.2
368D	Mahtomedi-Cress complex, 12 to 25 percent slopes-----	494	*
371A	Croswell loamy sand, 0 to 3 percent slopes-----	464	*
380B	Cress-Rosholt complex, 2 to 6 percent slopes-----	683	0.1
380C	Cress-Rosholt complex, 6 to 12 percent slopes-----	1,413	0.3
380D	Cress-Rosholt complex, 12 to 25 percent slopes-----	1,751	0.3
383B	Mahtomedi loamy sand, 0 to 6 percent slopes-----	3,817	0.7
383C	Mahtomedi loamy sand, 6 to 12 percent slopes-----	6,306	1.2
383D	Mahtomedi loamy sand, 12 to 30 percent slopes-----	5,488	1.0
396B	Friendship-Wurtsmith-Grayling complex, 0 to 6 percent slopes-----	216	*
397A	Perchlake loamy fine sand, 0 to 2 percent slopes-----	508	*
399B	Grayling sand, 0 to 6 percent slopes-----	11,132	2.0
399C	Grayling sand, 6 to 12 percent slopes-----	7,656	1.4
399D	Grayling sand, 12 to 30 percent slopes-----	8,334	1.5
405A	Lupton, Cathro, and Tawas soils, 0 to 1 percent slopes-----	15,054	2.8
406A	Loxley mucky peat, 0 to 1 percent slopes-----	10,820	2.0
407A	Seelyeville and Markey soils, 0 to 1 percent slopes-----	20,194	3.7
410A	Seelyeville and Cathro soils, 0 to 1 percent slopes-----	5,660	1.0
412A	Rifle and Tacoosh soils, 0 to 1 percent slopes-----	219	*
415A	Greenwood mucky peat, 0 to 1 percent slopes-----	86	*
439B	Graycalm-Menahga complex, 0 to 6 percent slopes-----	19,802	3.6
439C	Graycalm-Menahga complex, 6 to 12 percent slopes-----	22,879	4.2
439D	Graycalm-Menahga complex, 12 to 30 percent slopes-----	12,229	2.2
441C	Freeon, very stony-Cathro complex, 0 to 15 percent slopes-----	2,315	0.4
442C	Haugen, very stony-Greenwood complex, 0 to 15 percent slopes-----	10,598	1.9
443D	Amery, very stony-Greenwood complex, 0 to 35 percent slopes-----	6,929	1.3
461A	Bowstring muck, 0 to 1 percent slopes, frequently flooded-----	2,482	0.5
484A	Greenwood and Beseman soils, 0 to 1 percent slopes-----	2,023	0.4
495B	Karlsborg-Grettum-Perida complex, 1 to 6 percent slopes-----	367	*
495C	Karlsborg-Grettum-Perida complex, 6 to 12 percent slopes-----	333	*
495D	Karlsborg-Grettum-Perida complex, 12 to 30 percent slopes-----	264	*
497A	Meenon loamy sand, 0 to 3 percent slopes-----	373	*
515A	Manitowish sandy loam, 0 to 3 percent slopes-----	298	*
521A	Dody muck, 0 to 2 percent slopes-----	34	*
524E	Rock outcrop-Frogcreek-Metonga complex, 2 to 45 percent slopes, very stony-----	680	0.1
542B	Haugen, very stony-Haugen complex, 2 to 6 percent slopes-----	3,201	0.6
542C	Haugen, very stony-Haugen complex, 6 to 12 percent slopes-----	8,958	1.6
543B	Anigon silt loam, 2 to 6 percent slopes-----	3,221	0.6
543C2	Anigon silt loam, 6 to 12 percent slopes, eroded-----	2,512	0.5
544F	Menahga and Mahtomedi soils, 30 to 45 percent slopes-----	6,423	1.2
555A	Fordum silt loam, 0 to 2 percent slopes, frequently flooded-----	698	0.1
574B	Sayner loamy sand, 0 to 6 percent slopes-----	440	*
574C	Sayner loamy sand, 6 to 15 percent slopes-----	701	0.1
574E	Sayner loamy sand, 15 to 45 percent slopes-----	689	0.1
579B	Parkfalls sandy loam, 0 to 4 percent slopes, very stony-----	605	0.1
600A	Haplosaprists and Psammaquents, 0 to 2 percent slopes-----	622	0.1
615B	Cress sandy loam, 0 to 6 percent slopes-----	8,042	1.5
615C	Cress sandy loam, 6 to 12 percent slopes-----	4,568	0.8
615D	Cress sandy loam, 12 to 30 percent slopes-----	3,300	0.6
623A	Capitola muck, 0 to 2 percent slopes, very stony-----	666	0.1
624A	Ossmer silt loam, 0 to 3 percent slopes-----	719	0.1
632A	Aftad fine sandy loam, 0 to 2 percent slopes-----	569	0.1
632B	Aftad fine sandy loam, 2 to 6 percent slopes-----	1,989	0.4
632C	Aftad fine sandy loam, 6 to 12 percent slopes-----	564	0.1
633F	Pence and Padus soils, 30 to 45 percent slopes-----	35	*
648B	Sconsin silt loam, 1 to 6 percent slopes-----	1,251	0.2
670C	Keweenaw-Pence complex, 6 to 15 percent slopes, stony-----	11,260	2.1
670E	Keweenaw-Pence complex, 15 to 45 percent slopes, stony-----	16,257	3.0

See footnote at end of table.

Table 2.--Acreage and Proportionate Extent of the Soils--Continued

Map symbol	Soil name	Acres	Percent
671B	Spoonerhill, stony-Spoonerhill complex, 2 to 6 percent slopes-----	8,718	1.6
680B	Stanberry-Pence complex, 2 to 6 percent slopes, stony-----	2,258	0.4
683A	Tipler sandy loam, 0 to 3 percent slopes-----	228	*
706A	Winterfield-Totagatic complex, 0 to 2 percent slopes, frequently flooded	72	*
724A	Rib-Rock outcrop complex, 0 to 2 percent slopes-----	625	0.1
726B	Sissabagama loamy sand, 0 to 6 percent slopes-----	536	*
733A	Wozny muck, 0 to 2 percent slopes, very stony-----	949	0.2
771A	Lenroot loamy sand, 0 to 3 percent slopes-----	267	*
827A	Scoba sandy loam, 0 to 3 percent slopes-----	2,024	0.4
853C	Frogcreek-Stinnett-Wozny complex, 0 to 15 percent slopes, very stony----	8,125	1.5
856B	Stinnett silt loam, 0 to 4 percent slopes, very stony-----	1,846	0.3
857B	Frogcreek silt loam, 2 to 6 percent slopes, very stony-----	3,531	0.6
857C	Frogcreek silt loam, 6 to 15 percent slopes, very stony-----	5,915	1.1
873B	Stanberry sandy loam, 1 to 6 percent slopes, very stony-----	1,269	0.2
873C	Stanberry sandy loam, 6 to 15 percent slopes, very stony-----	1,985	0.4
873D	Stanberry sandy loam, 15 to 30 percent slopes, very stony-----	4,980	0.9
905A	Cublake loamy sand, 0 to 3 percent slopes-----	213	*
926A	Flink loamy sand, 0 to 3 percent slopes-----	155	*
943D	Stanberry, very stony-Greenwood complex, 0 to 35 percent slopes-----	338	*
948A	Billyboy silt loam, 0 to 3 percent slopes-----	355	*
970C	Keweenaw, stony-Pence, stony-Greenwood complex, 0 to 15 percent slopes---	1,513	0.3
970E	Keweenaw, stony-Pence, stony-Greenwood complex, 0 to 45 percent slopes---	5,043	0.9
1070C	Fremstadt, stony-Cress complex, 6 to 15 percent slopes-----	10,377	1.9
1070D	Fremstadt, stony-Cress complex, 15 to 30 percent slopes-----	3,778	0.7
1080B	Spoonerhill-Spoonerhill, stony-Cress complex, 1 to 6 percent slopes-----	3,600	0.7
1653C	Stanberry-Parkfalls-Wozny complex, 0 to 15 percent slopes, very stony----	1,788	0.3
2015	Pits-----	361	*
2050	Landfill-----	114	*
3011A	Barronett silt loam, 0 to 2 percent slopes-----	128	*
3125A	Meehan loamy sand, 0 to 2 percent slopes-----	1,597	0.3
3126A	Wurtsmith loamy sand, 0 to 3 percent slopes-----	3,630	0.7
3276A	Au Gres loamy sand, 0 to 3 percent slopes-----	253	*
3312B	Glendenning, very stony-Glendenning complex, 0 to 4 percent slopes-----	1,871	0.3
3336A	Fenander fine sandy loam, 0 to 2 percent slopes-----	263	*
3403A	Loxley, Beseman, and Dawson soils, 0 to 1 percent slopes-----	6,326	1.2
3424C	Frogcreek-Magroc-Stinnett complex, 0 to 15 percent slopes, very stony, rocky-----	3,934	0.7
3446A	Newson muck, 0 to 2 percent slopes-----	731	0.1
3448B	Grettum loamy sand, 0 to 6 percent slopes-----	10,350	1.9
3448C	Grettum loamy sand, 6 to 12 percent slopes-----	609	0.1
3516A	Slimlake sandy loam, 0 to 3 percent slopes-----	1,433	0.3
3629B	Perida loamy sand, 0 to 4 percent slopes-----	155	*
M-W	Miscellaneous water-----	156	*
W	Water-----	33,322	6.1
	Total-----	546,912	100.0

\* Less than 0.1 percent.



## Use and Management of the Soils

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This soil survey is an inventory and evaluation of the soils in the survey area. It can be used to adjust land uses to the limitations and potentials of natural resources and the environment. Also, it can help to prevent soil-related failures in land uses.

In preparing a soil survey, soil scientists, conservationists, engineers, and others collect extensive field data about the nature and behavioral characteristics of the soils. They collect data on erosion, droughtiness, flooding, and other factors that affect various soil uses and management. Field experience and collected data on soil properties and performance are used as a basis in predicting soil behavior.

Information in this section can be used to plan the use and management of soils for crops and pasture; as forest land; as sites for buildings, sanitary facilities, highways and other transportation systems, and parks and other recreational facilities; as sites for agricultural waste management; and as wildlife habitat. It can be used to identify the potentials and limitations of each soil for specific land uses and to help prevent construction failures caused by unfavorable soil properties.

Planners and others using soil survey information can evaluate the effect of specific land uses on productivity and on the environment in all or part of the survey area. The survey can help planners to maintain or create a land use pattern in harmony with the natural soil.

Contractors can use this survey to locate sources of sand and gravel, roadfill, and topsoil. They can use it to identify areas where bedrock, wetness, or very firm soil layers can cause difficulty in excavation.

Health officials, highway officials, engineers, and others may also find this survey useful. The survey can help them plan the safe disposal of wastes and locate sites for pavements, sidewalks, campgrounds, playgrounds, lawns, and trees and shrubs.

### Interpretive Ratings

The interpretive tables in this survey rate the soils in the survey area for various uses. Many of the tables identify the limitations that affect specified uses and indicate the severity of those limitations. The ratings in these tables are both verbal and numerical.

### Rating Class Terms

Rating classes are expressed in the tables in terms that indicate the extent to which the soils are limited by all of the soil features that affect a specified use or in terms that indicate the suitability of the soils for the use. Thus, the tables may show limitation classes or suitability classes. Terms for the limitation classes are *not limited*, *somewhat limited*, and *very limited*. The suitability ratings are expressed as *well suited*, *moderately suited*, *poorly suited*, and *unsuited* or as *good*, *fair*, *poor*, and *very poor*.

### Numerical Ratings

Numerical ratings in the tables indicate the relative severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate

gradations between the point at which a soil feature has the greatest negative impact on the use and the point at which the soil feature is not a limitation. The limitations appear in order from the most limiting to the least limiting. Thus, if more than one limitation is identified, the most severe limitation is listed first and the least severe one is listed last.

## Crops and Pasture

General management needed for crops and for hay and pasture is suggested in this section. Climate information for the survey area is provided, the estimated yields of the main crops and hay and pasture plants are listed, the system of land capability classification used by the Natural Resources Conservation Service is explained, and prime farmland is described. Planners of management systems for individual fields or farms should consider obtaining specific information from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

## Climate

Table 3 gives data on temperature and precipitation for the survey area as recorded at the Spooner Experiment Farm during the period from 1971 to 2000. Table 4 shows probable dates of the first freeze in fall and the last freeze in spring. Table 5 provides data on length of the growing season.

In winter, the average temperature is 14.9 degrees F and the average daily minimum temperature is 4.5 degrees. The lowest temperature on record, which occurred on February 16, 1936, is -46 degrees. In summer, the average temperature is 67.1 degrees and the average daily maximum temperature is 79.3 degrees. The highest temperature, which occurred on July 11, 1936, is 110 degrees.

Growing degree days are shown in table 3. They are equivalent to "heat units." During the month, growing degree days accumulate by the amount that the average temperature each day exceeds a base temperature (40 degrees F). The normal monthly accumulation is used to schedule single or successive plantings of a crop between the last freeze in spring and the first freeze in fall.

The total annual precipitation is about 30 inches. Of this total, 19.56 inches, or 65 percent, usually falls in May through September. The growing season for most crops falls within this period. The heaviest 1-day rainfall on record was 4.41 inches on May 9, 1918. Thunderstorms occur on about 35 days each year, and most occur between June and August.

The average seasonal snowfall is 51.8 inches. The greatest snow depth at any one time during the period of record was 40 inches on February 5, 1971. On an average, 107 days per year have at least 1 inch of snow on the ground. The heaviest 1-day snowfall on record was 18 inches on March 25, 1996.

The average relative humidity in midafternoon is about 50 percent in April and May and 70 percent in December. Humidity is higher at night, and the average at dawn is about 90 percent in the summer and 80 percent in the winter. The sun shines approximately 62 percent of the time possible in summer and about 50 percent in winter. The prevailing wind is from the south in most months, but it is from the northwest from December through April. Average windspeed is highest, around 11 miles per hour, in April.

## Cropland Management Considerations

The management concerns affecting the use of the soil map units in the survey area for crops are shown in table 6. The main concerns in managing nonirrigated

cropland are conserving moisture, controlling wind erosion and water erosion, and maintaining soil fertility.

*Conserving moisture* consists primarily of reducing the evaporation and runoff rates and increasing the water infiltration rate. Applying conservation tillage and conservation cropping systems, farming on the contour, stripcropping, establishing field windbreaks, and leaving crop residue on the surface conserve moisture.

Generally, a combination of several practices is needed to control *wind erosion* and *water erosion*. Conservation tillage, stripcropping, field windbreaks, contour farming, conservation cropping systems, crop residue management, terraces, diversions, and grassed waterways help to prevent excessive soil loss.

Measures that are effective in maintaining *soil fertility* include applying fertilizer, both organic and inorganic, including manure; incorporating crop residue or green manure crops into the soil; and using proper crop rotations. Controlling erosion helps to prevent the loss of organic matter and plant nutrients and thus helps to maintain productivity, although the level of fertility can be reduced even in areas where erosion is controlled. All soils used for nonirrigated crops respond well to applications of fertilizer.

Some of the considerations shown in the table cannot be easily overcome. These are channels, flooding, gullies, and ponding.

Additional considerations are as follows:

*Lime content, limited available water capacity, limited content of organic matter, potential poor tilth and compaction, and restricted permeability.*—These limitations can be minimized by incorporating green manure crops, manure, or crop residue into the soil; applying a system of conservation tillage; and using conservation cropping systems. Also, crops may respond well to additions of phosphate fertilizer to soils that have a high content of lime.

*Potential for ground-water contamination.*—The proper use of nutrients and pesticides can reduce the risk of ground-water contamination.

*Potential for surface-water contamination.*—The risk of surface-water contamination can be reduced by the proper use of nutrients and pesticides and by conservation farming practices that reduce the runoff rate.

*Surface crusting.*—This limitation retards seedling development after periods of heavy rainfall.

*Surface rock fragments.*—This limitation causes rapid wear of tillage equipment. It cannot be easily overcome.

*Surface stones.*—Stones or boulders on or near the surface can hinder normal tillage unless they are removed.

*Salt content.*—In areas where this is a limitation, only salt-tolerant crops should be grown.

On irrigated soils the main management concerns are efficient water use, nutrient management, control of erosion, pest and weed control, and timely planting and harvesting for a successful crop. An irrigation system that provides optimum control and distribution of water at minimum cost is needed. Overirrigation wastes water, leaches plant nutrients, and causes erosion. Also, it can increase wetness and soil salinity.

### Explanation of Criteria

*Acid soil.*—The pH is less than 6.1.

*Channeled.*—The word “channeled” is included in the map unit name.

*Dense layer.*—The bulk density is 1.80 g/cc or greater within the soil profile.

*Depth to rock.*—The depth to bedrock is less than 40 inches.

*Eroded.*—The word “eroded” is included in the map unit name.

*Excessive permeability.*—Saturated hydraulic conductivity is 42 micrometers per second or more within the soil profile.

*Flooding.*—Flooding is occasional, frequent, or very frequent.

*Gullied.*—The word “gullied” is included in the map unit name.

*High content of organic matter.*—The surface layer has more than 20 percent organic matter.

*Lime content.*—The pH is 7.4 or more in the surface layer, or the wind erodibility group is 4L.

*Limited available water capacity.*—The available water capacity calculated to a depth of 60 inches or to a root-limiting layer is 6 inches or less.

*Limited content of organic matter.*—The content of organic matter is 2 percent or less in the surface layer.

*Ponding.*—Ponding duration is assigned to the soil. Water is above the surface.

*Potential poor tilth and compaction.*—The content of clay is 27 percent or more in the surface layer.

*Potential for ground-water contamination* (by nutrients or pesticides).—The depth to a zone in which the soil moisture status is wet is 4 feet or less, the saturated hydraulic conductivity of any layer is more than 42 micrometers per second, or the depth to bedrock is less than 60 inches.

*Potential for surface-water contamination* (by nutrients or pesticides).—The soil is occasionally, frequently, or very frequently flooded, is subject to ponding, is assigned to hydrologic group C or D and has a slope of more than 2 percent, is assigned to hydrologic group A and has a slope of more than 6 percent, or is assigned to hydrologic group B, has a slope of 3 percent or more, and has a K factor of more than 0.17.

*Previously eroded.*—The word “eroded” is included in the map unit name.

*Restricted permeability.*—Saturated hydraulic conductivity is less than 0.42 micrometer per second within the soil profile.

*Salt content.*—The electrical conductivity is 4 or more in the surface layer or 8 or more within a depth of 30 inches.

*Slope* (equipment limitation).—The slope is more than 15 percent.

*Surface crusting.*—The content of clay is 27 percent or more and the content of organic matter is 2 percent or less in the surface layer.

*Surface rock fragments* (equipment limitation).—The terms describing the texture of the surface layer include any rock fragment modifier, except for gravelly, channery, stony, very stony, extremely stony, bouldery, very bouldery, and extremely bouldery.

*Surface stones* (equipment limitation).—The word “stony” or “bouldery” is included in the description of the surface layer, or 0.01 percent or more of the surface is covered by boulders.

*Water erosion.*—Either the slope is 6 percent or more, or the slope is more than 3 percent and less than 6 percent and the surface layer is not sandy.

*Wet soil moisture status.*—A zone in which the soil moisture status is wet is within 2.5 feet of the surface.

*Wind erosion.*—The wind erodibility group is 1, 2, 3, or 4L.

Hydrologic groups are described under the heading “Water Features.” Erosion factors (e.g., K factor) and wind erodibility groups are described under the heading “Physical Properties.”

## Crop Yield Estimates

The average yields per acre that can be expected of the principal crops and hay and pasture plants under a high level of management are shown in table 7. In any given year, yields may be higher or lower than those indicated in the table because of variations in rainfall and other climatic factors. The land capability classification of map units in the survey area also is shown in table 7.



The yields are based mainly on the experience and records of farmers, conservationists, and extension agents. Available yield data from nearby counties and results of field trials and demonstrations also are considered.

The management needed to obtain the indicated yields of the various crops depends on the kind of soil and the crop. Management can include drainage, erosion control, and protection from flooding; the proper planting and seeding rates; suitable high-yielding crop varieties; appropriate and timely tillage; control of weeds, plant diseases, and harmful insects; favorable soil reaction and optimum levels of nitrogen, phosphorus, potassium, and trace elements for each crop; effective use of crop residue, barnyard manure, and green manure crops; and harvesting that ensures the smallest possible loss.

The estimated yields reflect the productive capacity of each soil for each of the principal crops. Yields are likely to increase as new production technology is developed. The productivity of a given soil compared with that of other soils, however, is not likely to change.

Crops other than those shown in the table are grown in the survey area, but estimated yields are not listed because the acreage of such crops is small. The local office of the Natural Resources Conservation Service or the Cooperative Extension Service can provide information about the management and productivity of the soils for those crops.

### **Pasture and Hayland Interpretations**

Under good management, proper grazing is essential for the production of high-quality forage, stand survival, and erosion control. Proper grazing helps plants to maintain sufficient and generally vigorous top growth during the growing season. Brush control is essential in many areas, and weed control generally is needed. Rotation grazing and pasture renovation also are important management practices.

Yield estimates are often provided in animal unit months (AUM), or the amount of forage or feed required to feed one animal unit (one cow, one horse, one mule, five sheep, or five goats) for 30 days.

The local office of the Natural Resources Conservation Service or the Cooperative Extension Service can provide information about forage yields other than those shown in the yields table.

### **Land Capability Classification**

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not take into account major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for forest land or for engineering purposes.

In the capability system, soils generally are grouped at three levels—capability class, subclass, and unit (USDA, 1961). These categories indicate the degree and kinds of limitations affecting mechanized farming systems that produce the more commonly grown field crops, such as corn, small grain, cotton, hay, and field-grown vegetables. Only class and subclass are used in this survey.

*Capability classes*, the broadest groups, are designated by the numbers 1 through 8. The numbers indicate progressively greater limitations and narrower choices for practical use.

If properly managed, soils in classes 1, 2, 3, and 4 are suitable for the mechanized production of commonly grown field crops and for pasture and forest land. The degree of the soil limitations affecting the production of cultivated crops increases progressively from class 1 to class 4. The limitations can affect levels of production and the risk of permanent soil deterioration caused by erosion and other factors.

Soils in classes 5, 6, and 7 are generally not suited to the mechanized production of commonly grown field crops without special management, but they are suitable for plants that provide a permanent cover, such as grasses and trees. The severity of the soil limitations affecting crops increases progressively from class 5 to class 7.

Areas in class 8 are generally not suitable for crops, pasture, or forest land without a level of management that is impractical. These areas may have potential for other uses, such as recreational facilities and wildlife habitat.

*Capability subclasses* identify the dominant kind of limitation in the class. They are designated by adding a small letter, *e*, *w*, *s*, or *c*, to the class numeral, for example, 2*e*. The letter *e* shows that the main hazard is the risk of erosion unless a close-growing plant cover is maintained; *w* shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); *s* shows that the soil is limited mainly because it is shallow, droughty, or stony; and *c*, used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

There are no subclasses in class 1 because the soils of this class have few limitations. Class 5 contains only the subclasses indicated by *w*, *s*, or *c* because the soils in class 5 are subject to little or no erosion. They have other limitations that restrict their use mainly to pasture, forest land, wildlife habitat, or recreation.

The capability classification of map units in the survey area is given in table 7.

## Prime Farmland

Prime farmland is of major importance in meeting the Nation's short- and long-range needs for food and fiber. The acreage of high-quality farmland is limited, and the U.S. Department of Agriculture recognizes that government at local, State, and Federal levels, as well as individuals, must encourage and facilitate the wise use of our Nation's prime farmland.

Prime farmland soils, as defined by the U.S. Department of Agriculture, are soils that are best suited to food, feed, forage, fiber, and oilseed crops. Such soils have properties that favor the economic production of sustained high yields of crops. The soils need only to be treated and managed by acceptable farming methods. An adequate moisture supply and a sufficiently long growing season are required. Prime farmland soils produce the highest yields with minimal expenditure of energy and economic resources, and farming these soils results in the least damage to the environment.

Prime farmland soils may presently be used as cropland, pasture, or forest land or for other purposes. They either are used for food and fiber or are available for these uses. Urban or built-up land, public land, and water areas cannot be considered prime farmland. Urban or built-up land is any contiguous unit of land 10 acres or more in size that is used for such purposes as housing, industrial, and commercial sites, sites for institutions or public buildings, small parks, golf courses, cemeteries, railroad yards, airports, sanitary landfills, sewage treatment plants, and water-control structures. Public land is land not available for farming in national forests, national parks, military reservations, and state parks.

Prime farmland soils commonly receive an adequate and dependable supply of moisture from precipitation or irrigation. The temperature and growing season are favorable, and the level of acidity or alkalinity and the content of salts and sodium are

acceptable. The soils have few, if any, rocks and are permeable to water and air. They are not excessively erodible or saturated with water for long periods, and they are not frequently flooded during the growing season or are protected from flooding. Slopes range mainly from 0 to 6 percent.

Soils that have a saturated zone high in the profile or soils that are subject to flooding may qualify as prime farmland where these limitations are overcome by drainage measures or flood control. Onsite evaluation is necessary to determine the effectiveness of corrective measures. More information about the criteria for prime farmland can be obtained at the local office of the Natural Resources Conservation Service.

A recent trend in land use has been the conversion of prime farmland to urban and industrial uses. The loss of prime farmland to other uses puts pressure on lands that are less productive than prime farmland.

About 55,841 acres, or 10.2 percent of the survey area, meets the requirements for prime farmland.

The map units in the survey area that meet the requirements for prime farmland are listed in table 8. This list does not constitute a recommendation for a particular land use. On some soils included in the table, measures that overcome limitations are needed. The need for these measures is indicated in parentheses after the map unit name. The location of each map unit is shown on the soil maps. The soil qualities that affect use and management are described in the section "Soil Map Unit Descriptions."

## **Windbreaks and Environmental Plantings**

Windbreaks protect livestock, buildings, and yards from wind and snow. They also protect fruit trees and gardens, and they furnish habitat for wildlife. Several rows of low- and high-growing broadleaf and coniferous trees and shrubs provide the most protection.

Field windbreaks are narrow plantings made at right angles to the prevailing wind and at specific intervals across the field. The interval depends on the erodibility of the soil. Field windbreaks protect cropland and crops from wind, help to keep snow on the fields, and provide food and cover for wildlife.

Environmental plantings help to beautify and screen houses and other buildings and to abate noise. The plants, mostly evergreen shrubs and trees, are closely spaced. To ensure plant survival, a healthy planting stock of suitable species should be planted properly on a well prepared site and maintained in good condition.

Windbreaks are often planted on land that did not originally support trees. Knowledge of how trees perform on such land can be gained only by observing and recording the performance of trees that have been planted and have survived. Many popular windbreak species are not indigenous to the areas in which they are planted.

Each tree or shrub species has certain climatic and physiographic limits. Within these parameters, a tree or shrub may grow well or grow poorly, depending on the characteristics of the soil. Each tree or shrub has definable potential heights in a given physiographic area and under a given climate. Accurate definitions of potential heights are necessary when a windbreak is planned and designed.

Table 9 shows the height that locally grown trees and shrubs are expected to reach in 20 years on various soils. The estimates in this table are based on measurements and observation of established plantings that have been given adequate care. They can be used as a guide in planning windbreaks and screens. Additional information on planning windbreaks and screens and planting and caring for trees and shrubs can be obtained from local offices of the Natural Resources Conservation Service or the Cooperative Extension Service or from a nursery.

## Conservation Tree/Shrub Suitability Groups

Conservation tree/shrub suitability groups consist of soils in which the kinds and degrees of the hazards and limitations that affect the survival and growth of trees and shrubs in conservation plantings are about the same. The conservation tree/shrub suitability groups assigned to the soils in the survey area are listed in table 10. Descriptions of the groups are provided in the “National Forestry Manual,” which is available in local offices of the Natural Resources Conservation Service or on the Internet.

## Forest Land Management

Information about the hazards and limitations that should be considered in areas used as forest land are given in tables 11 through 14.

### Forest Land Harvest Equipment Considerations

Table 11 provides information regarding the use of harvest equipment in areas used as forest land.

For most soils spring is the most limiting season. Alternate thawing and freezing during snowmelt cause saturation and low strength of the surface soil layers. When thawing is complete, saturation continues for short periods in well drained soils to nearly all year in very poorly drained soils in depressions. Degrees of wetness are generally proportionate to the depth at which a zone of saturation occurs. This zone generally is lower in summer during the heavy use of moisture by vegetation and is nearer the surface during periods when absorbed precipitation is greater than the vegetation requires. Harvesting during periods of saturation usually results in severe soil damage, except when the soil is frozen. The preferred season for timber harvest on many soils is winter, when wetness and low soil strength can be overcome by freezing.

Considerations shown in table 11 are as follows:

*Slope.*—The upper slope limit is more than 15 percent.

*Flooding.*—The soil is frequently flooded.

*Wetness.*—The soil is somewhat poorly drained, poorly drained, or very poorly drained or has a perched zone in which the soil moisture status is wet (any drainage class).

*Depth to hard rock.*—The depth to hard bedrock is less than 10 inches.

*Rubbly surface.*—The word “rubbly” is in the map unit name.

*Surface stones.*—The words “extremely stony” are in the map unit name.

*Surface boulders.*—The word “bouldery” is in the map unit name.

*Areas of rock outcrop.*—Rock outcrop is a named component in the map unit.

*Susceptible to rutting and wheel slippage (low strength).*—The AASHTO classification is A-6, A-7, or A-8 in any layer at a depth of 20 inches or less.

*Poor traction (loose sandy material).*—The USDA texture includes sands or loamy sands in any layer at a depth of 10 inches or less.

### Forest Haul Road Considerations

Table 12 provides information regarding the use of the soils as haul roads. Haul roads serve as transportation routes from log landings to primary roads. Generally, haul roads are unpaved, but some are graveled.

Considerations shown in the table are as follows:

*Slope.*—The slope is 8 percent or more.

*Flooding.*—The soil is frequently flooded.

*Wetness.*—The soil is somewhat poorly drained, poorly drained, or very poorly drained or has a perched zone in which the soil moisture status is wet (any drainage class).

*Depth to hard rock.*—The depth to hard bedrock is less than 20 inches.

*Depth to soft rock.*—The depth to soft bedrock is less than 20 inches.

*Surface boulders.*—The word “bouldery” is in the map unit name.

*Areas of rock outcrop.*—Rock outcrop is a named component in the map unit.

*Low bearing strength.*—The AASHTO classification is A-6, A-7, or A-8 in any layer at a depth of 20 inches or less.

*Rubbly surface.*—The word “rubbly” is in the map unit name.

## Forest Log Landing Considerations

Table 13 provides information regarding the use of the soils as log landings. Log landings are areas where logs are assembled for transportation. Areas that require little or no cutting, filling, or surface preparation are desired.

Considerations shown in the table are as follows:

*Slope.*—The slope is more than 3 percent.

*Flooding.*—The soil is occasionally flooded or frequently flooded.

*Wetness.*—The soil is somewhat poorly drained, poorly drained, or very poorly drained or has a perched zone in which the soil moisture status is wet (any drainage class).

*Surface boulders.*—The word “bouldery” is in the map unit name.

*Areas of rock outcrop.*—Rock outcrop is a named component in the map unit.

*Susceptible to rutting and wheel slippage (low strength).*—The AASHTO classification is A-6, A-7, or A-8 in any layer at a depth of 20 inches or less.

*Rubbly surface.*—The word “rubbly” is in the map unit name.

## Forest Land Site Preparation and Planting Considerations

Table 14 provides information regarding considerations affecting site preparation and planting in areas used as forest land.

Considerations shown in the table are as follows:

*Slope.*—The upper slope limit is more than 15 percent.

*Flooding.*—The soil is frequently flooded.

*Wetness.*—The soil is somewhat poorly drained, poorly drained, or very poorly drained or has a perched zone in which the soil moisture status is wet (any drainage class).

*Depth to hard rock.*—The depth to hard bedrock is less than 20 inches.

*Surface stones.*—The word “stony” is in the map unit name.

*Surface boulders.*—The word “bouldery” is in the map unit name.

*Areas of rock outcrop.*—Rock outcrop is a named component in the map unit.

*Water erosion.*—The slope is 8 percent or more.

*Potential poor tilth and compaction.*—The AASHTO classification is A-6 or A-7 in the upper 10 inches.

*Rubbly surface.*—The word “rubbly” is in the map unit name.

*Cobbly surface.*—The word “cobbly” is in the map unit name.

## Forest Habitat Types

Joseph A. Kovach, forest ecologist/silviculturist, Division of Forestry, Wisconsin Department of Natural Resources, helped prepare this section.

The forest habitat type classification system (FHTCS) is a site classification system based on the floristic composition of plant communities. The system depends on the

identification of potential climax associations, repeatable patterns in the composition of the understory vegetation, and differential understory species. It groups land units with similar capacity to produce vegetation. The floristic composition of the plant community is used as an integrated indicator of those environmental factors that affect species reproduction, growth, competition, and community development. This classification system enables the recognition of ecologically similar landscape units and vegetation communities. It is a system for classifying forest plant communities and the sites on which they develop.

A forest habitat type is an aggregation of sites (units of land) capable of producing similar late-successional (potential climax) forest plant communities. Each recognizable habitat type represents a relatively narrow segment of environmental variation that is characterized by a certain limited potential for vegetation development. Although at any given time a habitat type can support a variety of disturbance-induced (seral) plant communities, the ultimate product of succession is presumed to be a similar climax community. Field identification of a habitat type provides a convenient label (habitat type name) for a given site and places that site in the context of a larger group of sites that share similar ecological traits.

Forest habitat types are characterized by plant associations, not by individual indicator species. Differential (diagnostic) species combinations in the understory flora are used to identify habitat types at any successional stage, but these combinations have meaning only in the context of the specific habitat types or groups being compared.

The forest habitat types in Washburn County can be identified and interpreted using *Field Guide to Forest Habitat Types of Northern Wisconsin*, 2nd edition (Kotar and others, 2002). The guide provides keys to habitat type identification based on the presence or absence of differential understory species; describes the characteristic understory species composition, the common forest cover types, and the expected successional trends; and summarizes management implications for each habitat type. Management considerations include inherent site capability (biological potential), potential responses to disturbance, competition, successional trends, potential cover types, and expected suitability and productivity for specific tree species. Additional interpretive information is available in *Wisconsin Forest Statistics, 1996: Analysis by Habitat Type Class* (Kotar and others, 1999).

Although soil map units do not coincide exactly with habitat types, there is a strong correlation between them. Soil moisture and nutrient regimes are key factors determining habitat type occurrence. Habitat types for the soils in Washburn County are shown in table 15. A single habitat type is considered *dominant* if it constitutes more than 60 percent coverage (one habitat type that has more than 60 percent occurrence). If no habitat types are dominant but two types with 25 to 59 percent occurrence add up to more than 70 percent, then they would be considered *codominant*. A *common* habitat type is listed when the expected frequency of occurrence is 15 to 55 percent and the requirements for identification as codominant are not met.

The following paragraphs briefly describe the habitat types in the county. The types are listed in the following order: dry and nutrient-poor sites; mesic and nutrient-rich sites; wet-mesic sites (nutrient rich to nutrient poor); and wet sites.

### **Region 1 Habitat Types (predominant in Washburn County)**

**PQGCe—*Pinus strobus*-*Quercus* spp./*Gaultheria procumbens*-*Ceanothus americanus* habitat type.** The common name is Eastern white pine-Oaks/Wintergreen-New Jersey tea. The presumed potential climax overstory is dominated by eastern white pine and oaks (white oak, bur oak, northern red oak, and northern pin oak). Currently, common cover types include any mixture of jack pine, red pine, northern pin oak, and northern red oak. Aspen is an occasional dominant or associate,



whereas bur oak and white oak are occasional associates. The dominant ground flora commonly includes grasses and sedges, hazelnut, blueberry, blackberries, junberry, wild rose, bracken fern, wild lily-of-the-valley, wintergreen, northern bedstraw, and oak seedlings.

The moisture regime is dry, and the nutrient regime is poor. The pines (jack pine, red pine, and white pine) exhibit moderate potential productivity. The timber productivity of other species is relatively poor, but the oaks do provide abundant mast for wildlife.

This habitat type is common on outwash plains in the northwestern part of the county.

**PARVAm—Pinus strobus-Acer rubrum/Vaccinium angustifolium-Amphicarpa bracteata habitat type.** The common name is Eastern white pine-Red maple/Blueberry-Hog peanut. The presumed potential climax overstory is dominated by eastern white pine, red maple, northern red oak, and white oak. Currently, common cover types include any mixture of aspen, white oak, red oak, and red maple. Overstory associates include white birch, northern pin oak, bur oak, white pine, red pine, and jack pine. The dominant ground flora commonly includes grasses and sedges, hazelnut, junberry, blackberries, blueberry, bracken fern, bigleaf aster, hog peanut, wild sarsaparilla, and red maple seedlings.

The moisture regime is dry or dry-mesic, and the nutrient regime is poor or medium. All of the pines exhibit excellent potential productivity, but intense competition often limits opportunities for the establishment and maintenance of jack pine. Aspen and paper birch can exhibit good growth and productivity, but the oaks and red maple demonstrate only moderate productivity.

This habitat type is most common on outwash plains in the central part of the county, but it also occurs on moraines and glacial lake plains throughout much of the county.

**AVDe—Acer saccharum/Vaccinium angustifolium-Desmodium glutinosum habitat type.** The common name is Sugar maple/Blueberry-Pointed-leaved tick trefoil. The presumed potential climax overstory is dominated by sugar maple, red maple, American basswood, and white ash but may also include northern red oak, white oak, and eastern white pine. Currently, common cover types include any mixture of aspen, white oak, red oak, and red maple. Overstory associates include sugar maple, basswood, white pine, and white birch. The dominant ground flora commonly includes grasses and sedges, maple-leaved viburnum, hazelnut, blackberries, bracken fern, bigleaf aster, pointed-leaved tick trefoil, hog peanut, wild sarsaparilla, interrupted fern, ironwood, and red maple and sugar maple seedlings.

The moisture regime is dry-mesic, and the nutrient regime is medium. Trees exhibiting excellent potential productivity include white pine, red pine, white birch, and aspen. Also, white oak, red oak, and red maple can exhibit good growth and productivity. The mesic hardwoods (sugar maple, basswood, and white ash) offer only moderate to poor potential productivity.

This habitat type is common on rolling moraines and outwash plains throughout much of the county.

**AAAt—Acer saccharum/Athyrium filix-femina habitat type.** The common name is Sugar maple/Lady fern. The presumed potential climax overstory is dominated by sugar maple, basswood, white ash, and red maple. Currently, common cover types include any mixture of northern red oak, white oak, red maple, sugar maple, and aspen. Common overstory associates include American basswood, white ash, eastern white pine, and white birch. The dominant ground flora commonly includes grasses and sedges, sugar maple seedlings, ironwood seedlings, hazelnut, bigleaf aster, hog peanut, pointed-leaved tick trefoil, lady fern, interrupted fern, bracken fern, early meadow rue, sweet cicely, trilliums, sessile-leaved bellwort, wild sarsaparilla, and maple-leaved viburnum.



The moisture regime is dry-mesic, and the nutrient regime is medium or rich. Mesic hardwoods (sugar maple, basswood, white ash, and red maple) are very competitive, and potential productivity is good. Red oak, white oak, and white pine demonstrate excellent productivity but require significant disturbance for successful regeneration. Following severe disturbance, aspen and paper birch can demonstrate excellent productivity as pioneers.

This habitat type is common on moraines, outwash plains, and glacial lake plains in the southern part of the county.

**ACaCi—*Acer saccharum*/*Caulophyllum thalictroides*-*Circaea quadrisulcata* habitat type.** The common name is Sugar maple/Blue cohosh-Enchanter's nightshade. The presumed potential climax overstory is dominated by sugar maple, American basswood, and white ash. Currently, common cover types include any mixture of sugar maple, northern red oak, white oak, and aspen. Common associates are red maple, basswood, white ash, black cherry, and white birch. The dominant ground flora commonly includes grasses and sedges, sugar maple seedlings, bigleaf aster, wild geranium, sweet cicely, lady fern, early meadow rue, trilliums, yellow violets, enchanter's nightshade, hog peanut, maidenhair fern, and black snakeroot.

The moisture regime is mesic or dry-mesic, and the nutrient regime is rich. Most tree species can exhibit excellent growth and productivity on these sites if establishment opportunities exist and competition is controlled. Northern hardwoods demonstrate excellent productive potential and competitive advantages. Oaks commonly are present but require aggressive management (significant disturbance) for regeneration.

This habitat type is somewhat common on moraines, outwash plains, and glacial lake plains in the southern part of the county.

**ASal—*Acer saccharum*/*Sanguinaria canadensis*-*Impatiens capensis* habitat type.** The common name is Sugar maple/Bloodroot-Jewelweed. The presumed potential climax overstory is dominated by sugar maple, red maple, white ash, green ash, black ash, American basswood, and yellow birch. Currently, common cover types include any mixture of aspen, red maple, oaks (red oak, white oak, and bur oak), basswood, and white birch. The dominant ground flora commonly includes grasses and sedges, lady fern, sweet cicely, jewelweed, bigleaf aster, wood anemone, trilliums, bloodroot, early meadow rue, gooseberry, sensitive fern, interrupted fern, wild geranium, Virginia creeper, Virginia waterleaf, enchanter's nightshade, black snakeroot, hog peanut, and hazelnut.

The moisture regime is wet-mesic or mesic, and the nutrient regime is rich. Although the characteristic dampness can limit tree growth and productivity, most of the commonly occurring tree species can exhibit good potential productivity. Mesic hardwoods (sugar maple, basswood, and white ash) are most competitive in the absence of disturbance, but productivity is only good to moderate. Mid-tolerant hardwoods that require some disturbance for regeneration but that demonstrate good to excellent productive potential are black ash and red maple.

This habitat type occurs on moraines, outwash plains, and glacial lake plains in the southern part of the county.

**ArVRp—*Acer rubrum*/*Vaccinium* spp.-*Rubus pubescens* habitat type.** The common name is Red maple/Blueberries-Dwarf raspberry. The presumed potential climax overstory is dominated by red maple and eastern white pine. Currently, aspen and red maple dominate most stands. Common associates and occasional dominants include white birch, pines (white pine, red pine, and jack pine), and oaks (white oak, bur oak, northern red oak, and northern pin oak). The dominant ground flora commonly includes grasses and sedges, hazelnut, bush honeysuckle, bunchberry, dwarf raspberry, swamp dewberry, bracken fern, interrupted fern, lady fern, bigleaf aster, wild lily-of-the-valley, sessile-leaved bellwort, wild sarsaparilla, and red maple seedlings.

The moisture regime is wet-mesic to dry-mesic, and the nutrient regime is poor or medium. Although the characteristic dampness can limit tree growth and productivity, most of the commonly occurring tree species can exhibit good to moderate potential productivity. White pine offers the greatest growth potential.

This habitat type is mostly on outwash plains and glacial lake plains in the southern part of the county.

**Region 3 Habitat Types (occurring only in northeastern and east-central Washburn County)**

**PARVAa—*Pinus strobus*-*Acer rubrum*/*Vaccinium angustifolium*-*Aralia nudicaulis* habitat type.** The common name is Eastern white pine-Red maple/Low sweet blueberry-Wild sarsaparilla. The presumed potential climax overstory is dominated by eastern white pine and red maple but may include northern red oak, balsam fir, and white spruce. Currently, common cover types include any mixture of aspen, paper birch, red oak, red maple, white pine, and red pine. The dominant ground flora commonly includes grasses and sedges, hazelnut, blackberries, blueberry, bush honeysuckle, bracken fern, wild sarsaparilla, wild lily-of-the-valley, bigleaf aster, starflower, barren strawberry, wintergreen, and red maple and balsam fir seedlings.

The moisture regime is dry or dry-mesic, and the nutrient regime is poor or medium. The pines exhibit excellent potential productivity, but intense competition often limits opportunities for the establishment and maintenance of jack pine. Aspen, paper birch, and white spruce can exhibit good growth and productivity, whereas red oak and red maple demonstrate only moderate productivity.

This habitat type occurs only in a small area on outwash plains in the east-central part of the county.

**AVVb—*Acer saccharum*/*Vaccinium angustifolium*-*Viburnum acerifolium* habitat type.** The common name is Sugar maple/Low sweet blueberry-Mapleleaf viburnum. The presumed potential climax overstory is dominated by sugar maple, red maple, and northern red oak. Currently, common cover types include any mixture of aspen, paper birch, red oak, red maple, sugar maple, and eastern white pine. The dominant ground flora commonly includes grasses and sedges, hazelnut, blackberries, mapleleaf viburnum, bracken fern, wild sarsaparilla, bigleaf aster, ironwood, and red maple and sugar maple seedlings.

The moisture regime is dry-mesic, and the nutrient regime is medium. Trees exhibiting excellent potential productivity include red pine, white pine, aspen, and paper birch. Also, red oak, red maple, and white spruce can exhibit good growth and productivity. Although it is common, sugar maple generally is of poor quality.

This habitat type occurs on the moraines and outwash plains in the northeastern part of the county.

**ATM—*Acer saccharum*-*Tsuga canadensis*/*Maianthemum canadense* habitat type.** The common name is Sugar maple-Eastern hemlock/Wild lily-of-the-valley. The presumed potential climax overstory is dominated by sugar maple, eastern hemlock, and yellow birch. Currently, common cover types include any mixture of sugar maple, red maple, aspen, paper birch, American basswood, northern red oak, white ash, yellow birch, balsam fir, and eastern hemlock. The dominant ground flora commonly includes grasses and sedges, sugar maple seedlings, hazelnut, bush honeysuckle, bracken fern, spinulose shield fern, lady fern, wild sarsaparilla, wild lily-of-the-valley, bigleaf aster, beadlily, and starflower.

The moisture regime is mesic, and the nutrient regime is medium. Trees exhibiting good to excellent productive and competitive potential include sugar maple, basswood, white ash, yellow birch, and hemlock. Others demonstrating excellent productivity but limited competitive abilities include red maple, red oak, and white pine. Following severe disturbance, aspen and paper birch can demonstrate excellent productivity as pioneers.

This habitat type occurs on the moraines and outwash plains in the northeastern part of the county.

**ATD—*Acer saccharum*-*Tsuga canadensis*/*Dryopteris spinulosa* habitat type.**

The common name is Sugar maple-Eastern hemlock/Spinulose shield fern. The presumed potential climax overstory is dominated by sugar maple, eastern hemlock, and yellow birch. Currently, most stands are dominated by sugar maple and aspen. Common overstory associates include basswood, white ash, red maple, red oak, yellow birch, and hemlock. The dominant ground flora commonly includes grasses and sedges, sugar maple seedlings, spinulose shield fern, lady fern, wild lily-of-the-valley, and starflower.

The moisture regime is mesic, and the nutrient regime is medium or rich. Most trees can exhibit excellent growth and productivity if establishment opportunities exist and competition is controlled. Northern hardwoods and hemlock-hardwoods demonstrate excellent productive potential and competitive advantages.

This habitat type occurs on the moraines in the northeastern part of the county.

**AOCa—*Acer saccharum*/*Osmorhiza claytonii*-*Caulophyllum thalictroides* habitat type.**

The common name is Sugar maple/Sweet cicely-Blue cohosh. The presumed potential climax overstory is dominated by sugar maple. Currently, most stands are dominated by sugar maple and American basswood and some aspen. Common overstory associates include yellow birch, eastern hemlock, white ash, red maple, and black cherry. The dominant ground flora commonly includes grasses and sedges, sugar maple seedlings, hazelnut, lady fern, spinulose shield fern, bigleaf aster, wild sarsaparilla, trilliums, sweet cicely, blue cohosh, and gooseberries.

The moisture regime is mesic, and the nutrient regime is rich. Most tree species can exhibit excellent growth and productivity if establishment opportunities exist and competition is controlled. Northern hardwoods demonstrate excellent productive potential and competitive advantages.

This habitat type occurs on the moraines in the northeastern part of the county.

**ACal—*Acer saccharum*/*Caulophyllum thalictroides*-*Impatiens capensis* habitat type.**

The common name is Sugar maple/Blue cohosh-Jewelweed. The presumed potential climax overstory is dominated by sugar maple. Currently, most stands are dominated by sugar maple, red maple, American basswood, and aspen. Common overstory associates include yellow birch, black ash, green ash, white ash, and hemlock. The dominant ground flora commonly includes grasses and sedges, sugar maple seedlings, lady fern, spinulose shield fern, blue cohosh, sweet cicely, jack-in-the-pulpit, trilliums, and gooseberries.

The moisture regime is wet-mesic or mesic, and the nutrient regime is rich. Although the characteristic dampness can limit tree growth and productivity, most of the commonly occurring tree species can exhibit good to excellent potential productivity. Sugar maple growth and quality are good.

This habitat type occurs on the moraines in the northeastern part of the county.

**ATAtOn—*Acer saccharum*-*Tsuga canadensis*/*Athyrium filix-femina*-*Onoclea sensibilis* habitat type.** The common name is Sugar maple-Eastern hemlock/Lady fern-Sensitive fern. The presumed potential climax overstory is dominated by sugar maple, red maple, yellow birch, and eastern hemlock. Currently, common cover types include any mixture of red maple, sugar maple, yellow birch, hemlock, basswood, black ash, green ash, and aspen. The dominant ground flora commonly includes grasses and sedges, red maple and sugar maple seedlings, hazelnut, blackberries, lady fern, spinulose shield fern, sensitive fern, horsetails, jewelweed, and bigleaf aster.

The moisture regime is wet-mesic or mesic, and the nutrient regime is medium or rich. Although the characteristic dampness can limit tree growth and productivity, most of the commonly occurring tree species can exhibit good to excellent potential productivity. Sugar maple growth and quality are only moderate.

This habitat type occurs on the moraines in the northeastern part of the county.

**TMC—*Tsuga canadensis*/Maianthemum canadense-Coptis groenlandica**  
**habitat type.** The common name is Eastern hemlock/Wild lily-of-the-valley-Goldthread. The presumed potential climax overstory is dominated by eastern hemlock, yellow birch, red maple, and sugar maple. Currently, common cover types include any mixture of red maple, balsam fir, aspen, paper birch, sugar maple, yellow birch, and hemlock. The dominant ground flora commonly includes grasses and sedges, sugar maple and red maple seedlings, balsam fir seedlings, hazelnut, bracken fern, clubmosses, bunchberry, wild lily-of-the-valley, wild sarsaparilla, bigleaf aster, beadlily, and starflower.

The moisture regime is wet-mesic or mesic, and the nutrient regime is medium. Although the characteristic dampness can limit tree growth and productivity, most of the commonly occurring tree species can exhibit good potential productivity. Areas of this habitat type are not ideal for management of northern hardwoods because sugar maple growth and quality are limited.

This habitat type occurs on the moraines in the northeastern part of the county.

**ArAbVC—*Acer rubrum*-*Abies balsamea*/Vaccinium spp.-Coptis groenlandica**  
**habitat type.** The common name is Red maple-Balsam fir/Blueberries-Goldthread. The presumed potential climax overstory is dominated by red maple, balsam fir, white spruce, and hemlock. Currently, common cover types include any mixture of aspen, paper birch, red maple, balsam fir, white spruce, white pine, and red pine. The dominant ground flora commonly includes grasses and sedges, red maple and balsam fir seedlings, hazelnut, blackberries, blueberries, bush honeysuckle, bracken fern, clubmosses, bunchberry, goldthread, wild lily-of-the-valley, wild sarsaparilla, bigleaf aster, beadlily, and starflower.

The moisture regime is wet-mesic to dry-mesic, and the nutrient regime is poor or medium. Although the characteristic dampness can limit tree growth and productivity, most of the commonly occurring tree species can exhibit good to moderate potential productivity.

This habitat type occurs only in a small area on outwash plains in the east-central part of the county.

### Forest Lowland Habitat Types

No forested lowland habitat types have been defined and characterized. Currently, common lowland cover types include any mixture of northern white-cedar, tamarack, black spruce, balsam fir, black ash, red maple, and aspen. To help identify biological potentials, these poorly drained and very poorly drained sites can be subdivided into flood plain (Lfp), mineral soil lowland (Lmin), nonacid organic soil lowland (Lnorg), and acid organic soil lowland (Laorg). Forested lowlands are common throughout the county.

## Recreation

The soils of the survey area are rated in tables 16a and 16b according to limitations that affect their suitability for recreation. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the recreational uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The ratings in the tables are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation also are important. Soils that are subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

The information in tables 16a and 16b can be supplemented by other information in this survey, for example, interpretations for building site development, construction materials, sanitary facilities, and water management.

*Camp areas* require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The ratings are based on the soil properties that affect the ease of developing camp areas and the performance of the areas after development. Slope, stoniness, and depth to bedrock or a cemented pan are the main concerns affecting the development of camp areas. The soil properties that affect the performance of the areas after development are those that influence trafficability and promote the growth of vegetation, especially in heavily used areas. For good trafficability, the surface of camp areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a zone in which the soil moisture status is wet, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

*Picnic areas* are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of picnic areas. For good trafficability, the surface of picnic areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a zone in which the soil moisture status is wet, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

*Playgrounds* require soils that are nearly level, are free of stones, and can withstand intensive foot traffic. The ratings are based on the soil properties that affect the ease of developing playgrounds and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of playgrounds. For good trafficability, the surface of the playgrounds should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a zone in which the soil moisture status is wet, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

*Paths and trails* for hiking and horseback riding should require little or no slope modification through cutting and filling. The ratings are based on the soil properties



that affect trafficability and erodibility. These properties are stoniness, depth to a zone in which the soil moisture status is wet, ponding, flooding, slope, and texture of the surface layer.

*Off-road motorcycle trails* require little or no site preparation. They are not covered with surfacing material or vegetation. Considerable compaction of the soil material is likely. The ratings are based on the soil properties that influence erodibility, trafficability, dustiness, and the ease of revegetation. These properties are stoniness, slope, depth to a zone in which the soil moisture status is wet, ponding, flooding, and texture of the surface layer.

*Golf fairways* are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a zone in which the soil moisture status is wet; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a zone in which the soil moisture status is wet, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer. The suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.

## Wildlife Habitat

Soils affect the kind and amount of vegetation that is available to wildlife as food and cover. They also affect the construction of water impoundments. The kind and abundance of wildlife depend largely on the amount and distribution of food, cover, and water. Wildlife habitat can be created or improved by planting appropriate vegetation, by maintaining the existing plant cover, or by promoting the natural establishment of desirable plants.

In table 17, the soils in the survey area are rated according to their potential for providing habitat for various kinds of wildlife. This information can be used in planning parks, wildlife refuges, nature study areas, and other developments for wildlife; in selecting soils that are suitable for establishing, improving, or maintaining specific elements of wildlife habitat; and in determining the intensity of management needed for each element of the habitat.

The potential of the soil is rated good, fair, poor, or very poor. A rating of *good* indicates that the element or kind of habitat is easily established, improved, or maintained. Few or no limitations affect management, and satisfactory results can be expected. A rating of *fair* indicates that the element or kind of habitat can be established, improved, or maintained in most places. Moderately intensive management is required for satisfactory results. A rating of *poor* indicates that limitations are severe for the designated element or kind of habitat. Habitat can be created, improved, or maintained in most places, but management is difficult and must be intensive. A rating of *very poor* indicates that restrictions for the element or kind of habitat are very severe and that unsatisfactory results can be expected. Creating, improving, or maintaining habitat is impractical or impossible.

The elements of wildlife habitat are described in the following paragraphs.

*Grain and seed crops* are domestic grains and seed-producing herbaceous plants. Soil properties and features that affect the growth of grain and seed crops are depth of the root zone, texture of the surface layer, available water capacity, wetness, slope, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of grain and seed crops are corn, soybeans, wheat, oats, and barley.

*Grasses and legumes* are domestic perennial grasses and herbaceous legumes. Soil properties and features that affect the growth of grasses and legumes are depth

of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, flooding, and slope. Soil temperature and soil moisture also are considerations. Examples of grasses and legumes are brome grass, timothy, orchard grass, clover, alfalfa, wheatgrass, and birdsfoot trefoil.

*Wild herbaceous plants* are native or naturally established grasses and forbs, including weeds. Soil properties and features that affect the growth of these plants are depth of the root zone, texture of the surface layer, available water capacity, wetness, surface stoniness, and flooding. Soil temperature and soil moisture also are considerations. Examples of wild herbaceous plants are bluestems, indiangrass, blueberry, goldenrod, lambsquarters, dandelions, blackberry, ragweed, and nightshade.

*Hardwood trees* and woody understory produce nuts or other fruit, buds, catkins, twigs, bark, and foliage. Soil properties and features that affect the growth of hardwood trees and shrubs are depth of the root zone, available water capacity, and wetness. Examples of these plants are oak, poplar, box elder, birch, maple, green ash, willow, and American elm. Examples of fruit-producing shrubs that are suitable for planting on soils rated *good* are Russian olive and crabapple.

*Coniferous plants* furnish browse and seeds. Soil properties and features that affect the growth of coniferous trees, shrubs, and ground cover are depth of the root zone, available water capacity, and wetness. Examples of coniferous plants are pine, spruce, cedar, and tamarack.

*Wetland plants* are annual and perennial wild herbaceous plants that grow on moist or wet sites. Submerged or floating aquatic plants are excluded. Soil properties and features affecting wetland plants are texture of the surface layer, wetness, reaction, salinity, slope, and surface stoniness. Examples of wetland plants are smartweeds, wild millet, rushes, sedges, bulrushes, wild rice, arrowhead, waterplantain, cattail, prairie cordgrass, bluejoint grass, asters, and beggarticks.

*Shallow water areas* have an average depth of less than 5 feet. Some are naturally wet areas. Others are created by dams, levees, or other water-control structures. Soil properties and features affecting shallow water areas are depth to bedrock, wetness, surface stoniness, slope, and permeability. Examples of shallow water areas are waterfowl feeding areas, wildlife watering developments, beaver ponds, and other wildlife ponds.

The habitat for various kinds of wildlife is described in the following paragraphs.

*Habitat for openland wildlife* consists of cropland, pasture, meadows, and areas that are overgrown with grasses, herbs, shrubs, and vines. These areas produce grain and seed crops, grasses and legumes, and wild herbaceous plants. Wildlife attracted to these areas include Hungarian partridge, ring-necked pheasant, bobwhite quail, sharp-tailed grouse, meadowlark, field sparrow, killdeer, cottontail rabbit, and red fox.

*Habitat for woodland wildlife* consists of areas of deciduous and/or coniferous plants and associated grasses, legumes, and wild herbaceous plants. Wildlife attracted to these areas include wild turkey, ruffed grouse, thrushes, woodpeckers, owls, tree squirrels, porcupine, raccoon, white-tailed deer, and black bear.

*Habitat for wetland wildlife* consists of open, marshy or swampy shallow water areas. Some of the wildlife attracted to such areas are ducks, geese, herons, bitterns, rails, kingfishers, muskrat, otter, mink, and beaver.

## Engineering

This section provides information for planning land uses related to urban development and to water management. Soils are rated for various uses, and the most limiting features are identified. Ratings are given for building site development, sanitary facilities, construction materials, and water management. The ratings are based on



observed performance of the soils and on the data in the tables described under the heading "Soil Properties."

*Information in this section is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet. Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.*

*The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.*

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this section. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Soil properties, site features, and observed performance were considered in determining the ratings in this section. During the fieldwork for this soil survey, determinations were made about particle-size distribution, liquid limit, plasticity index, soil reaction, depth to bedrock, hardness of bedrock within 5 to 7 feet of the surface, soil wetness, depth to a zone in which the soil moisture status is wet, ponding, slope, likelihood of flooding, natural soil structure aggregation, and soil density. Data were collected about kinds of clay minerals, mineralogy of the sand and silt fractions, and the kinds of adsorbed cations. Estimates were made for erodibility, permeability, corrosivity, shrink-swell potential, available water capacity, and other behavioral characteristics affecting engineering uses.

This information can be used to evaluate the potential of areas for residential, commercial, industrial, and recreational uses; make preliminary estimates of construction conditions; evaluate alternative routes for roads, streets, highways, pipelines, and underground cables; evaluate alternative sites for sanitary landfills, septic tank absorption fields, and sewage lagoons; plan detailed onsite investigations of soils and geology; locate potential sources of gravel, sand, earthfill, and topsoil; plan drainage systems, irrigation systems, ponds, terraces, and other structures for soil and water conservation; and predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

The information in the tables, along with the soil maps, the soil descriptions, and other data provided in this survey, can be used to make additional interpretations.

Some of the terms used in this soil survey have a special meaning in soil science and are defined in the Glossary.

## **Building Site Development**

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. Tables 18a and 18b show the degree and kind of soil limitations that affect dwellings with and without basements, small commercial buildings, local roads and streets, shallow excavations, and lawns and landscaping.

The ratings in the tables are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning,

design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

*Dwellings* are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a zone in which the soil moisture status is wet, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a zone in which the soil moisture status is wet, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

*Small commercial buildings* are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a zone in which the soil moisture status is wet, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a zone in which the soil moisture status is wet, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

*Local roads and streets* have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, depth to a zone in which the soil moisture status is wet, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a zone in which the soil moisture status is wet, and ponding.

*Shallow excavations* are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, the amount of large stones, and dense layers influence the ease of digging, filling, and

compacting. Depth to a seasonal zone in which the soil moisture status is wet, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to a zone in which the soil moisture status is wet, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

*Lawns and landscaping* require soils on which turf and ornamental trees and shrubs can be established and maintained. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a zone in which the soil moisture status is wet; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a zone in which the soil moisture status is wet, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer.

## Sanitary Facilities

Tables 19a and 19b show the degree and kind of soil limitations that affect septic tank absorption fields, sewage lagoons, sanitary landfills, and daily cover for landfill. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

*Septic tank absorption fields* are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 60 inches is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Permeability, depth to a zone in which the soil moisture status is wet, ponding, depth to bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the distribution lines. In these soils the absorption field may not adequately filter the effluent, particularly when the system is new. As a result, the ground water may become contaminated.

*Sewage lagoons* are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water. Considered in the ratings are slope, permeability, depth

to a zone in which the soil moisture status is wet, ponding, depth to bedrock or a cemented pan, flooding, large stones, and content of organic matter.

Soil permeability is a critical property affecting the suitability for sewage lagoons. Most porous soils eventually become sealed when they are used as sites for sewage lagoons. Until sealing occurs, however, the hazard of pollution is severe. Soils that have a permeability rate of more than 2 inches per hour are too porous for the proper functioning of sewage lagoons. In these soils, seepage of the effluent can result in contamination of the ground water. Ground-water contamination is also a hazard if fractured bedrock is within a depth of 40 inches, if a saturated zone is high enough to raise the level of sewage in the lagoon, or if floodwater overtops the lagoon.

A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor. If the lagoon is to be uniformly deep throughout, the slope must be gentle enough and the soil material must be thick enough over bedrock or a cemented pan to make land smoothing practical.

A *trench sanitary landfill* is an area where solid waste is placed in successive layers in an excavated trench. The waste is spread, compacted, and covered daily with a thin layer of soil excavated at the site. When the trench is full, a final cover of soil material at least 2 feet thick is placed over the landfill. The ratings in the table are based on the soil properties that affect the risk of pollution, the ease of excavation, trafficability, and revegetation. These properties include permeability, depth to bedrock or a cemented pan, depth to a zone in which the soil moisture status is wet, ponding, slope, flooding, texture, stones and boulders, highly organic layers, soil reaction, and content of salts and sodium. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, onsite investigation may be needed.

Hard, nonrippable bedrock, creviced bedrock, or highly permeable strata in or directly below the proposed trench bottom can affect the ease of excavation and the hazard of ground-water pollution. Slope affects construction of the trenches and the movement of surface water around the landfill. It also affects the construction and performance of roads in areas of the landfill.

Soil texture and consistence affect the ease with which the trench is dug and the ease with which the soil can be used as daily or final cover. They determine the workability of the soil when dry and when wet. Soils that are plastic and sticky when wet are difficult to excavate, grade, or compact and are difficult to place as a uniformly thick cover over a layer of refuse.

The soil material used as the final cover for a trench landfill should be suitable for plants. It should not have excess sodium or salts and should not be too acid. The surface layer generally has the best workability, the highest content of organic matter, and the best potential for plants. Material from the surface layer should be stockpiled for use as the final cover.

In an *area sanitary landfill*, solid waste is placed in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil from a source away from the site. A final cover of soil material at least 2 feet thick is placed over the completed landfill. The ratings in the table are based on the soil properties that affect trafficability and the risk of pollution. These properties include flooding, permeability, depth to a zone in which the soil moisture status is wet, ponding, slope, and depth to bedrock or a cemented pan.

Flooding is a serious problem because it can result in pollution in areas downstream from the landfill. If permeability is too rapid or if fractured bedrock, a fractured cemented pan, or a saturated zone is close to the surface, the leachate can contaminate the water supply. Slope is a consideration because of the extra grading required to maintain roads in the steeper areas of the landfill. Also, leachate may flow

along the surface of the soils in the steeper areas and cause difficult seepage problems.

*Daily cover for landfill* is the soil material that is used to cover compacted solid waste in an area sanitary landfill. The soil material is obtained offsite, transported to the landfill, and spread over the waste. The ratings in the table also apply to the final cover for a landfill. They are based on the soil properties that affect workability, the ease of digging, and the ease of moving and spreading the material over the refuse daily during wet and dry periods. These properties include soil texture, depth to a zone in which the soil moisture status is wet, ponding, rock fragments, slope, depth to bedrock or a cemented pan, reaction, and content of salts, sodium, or lime.

Loamy or silty soils that are free of large stones and excess gravel are the best cover for a landfill. Clayey soils may be sticky and difficult to spread; sandy soils are subject to wind erosion.

Slope affects the ease of excavation and of moving the cover material. Also, it can influence runoff, erosion, and reclamation of the borrow area.

After soil material has been removed, the soil material remaining in the borrow area must be thick enough over bedrock, a cemented pan, or a saturated zone to permit revegetation. The soil material used as the final cover for a landfill should be suitable for plants. It should not have excess sodium, salts, or lime and should not be too acid.

## Construction Materials

Tables 20a and 20b give information about the soils as potential sources of gravel, sand, reclamation material, roadfill, and topsoil. Normal compaction, minor processing, and other standard construction practices are assumed.

*Sand* and *gravel* are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In table 20a, only the likelihood of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the bottom layer of the soil contains sand or gravel, the soil is considered a likely source regardless of thickness. The assumption is that the sand or gravel layer below the depth of observation exceeds the minimum thickness.

The soils are rated *good*, *fair*, or *poor* as potential sources of gravel or sand. A rating of *good* or *fair* means that the source material is likely to be in or below the soil. The bottom layer and the thickest layer of the soils are assigned numerical ratings. These ratings indicate the likelihood that the layer is a source of sand or gravel. The number 0.00 indicates that the layer is a poor source. The number 1.00 indicates that the layer is a good source. A number between 0.00 and 1.00 indicates the degree to which the layer is a likely source.

In table 20b, the soils are rated *good*, *fair*, or *poor* as potential sources of reclamation material, roadfill, and topsoil. The features that limit the soils as sources of these materials are specified in the table. The numerical ratings given after the specified features indicate the degree to which the features limit the soils as sources of reclamation material, roadfill, or topsoil. The lower the number, the greater the limitation.

*Reclamation material* is used in areas that have been drastically disturbed by surface mining or similar activities. When these areas are reclaimed, layers of soil material or unconsolidated geological material, or both, are replaced in a vertical sequence. The reconstructed soil favors plant growth. The ratings in the table do not apply to quarries and other mined areas that require an offsite source of



reconstruction material. The ratings are based on the soil properties that affect erosion and stability of the surface and the productive potential of the reconstructed soil. These properties include the content of sodium, salts, and calcium carbonate; reaction; available water capacity; erodibility; texture; content of rock fragments; and content of organic matter and other features that affect fertility.

*Roadfill* is soil material that is excavated in one place and used in road embankments in another place. In this table, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the whole soil, from the surface to a depth of about 5 feet. It is assumed that soil layers will be mixed when the soil material is excavated and spread.

The ratings are based on the amount of suitable material and on soil properties that affect the ease of excavation and the performance of the material after it is in place. The thickness of the suitable material is a major consideration. The ease of excavation is affected by large stones, depth to a zone in which the soil moisture status is wet, and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the AASHTO classification of the soil) and linear extensibility (shrink-swell potential).

*Topsoil* is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area. The ratings are based on the soil properties that affect plant growth; the ease of excavating, loading, and spreading the material; and reclamation of the borrow area. Toxic substances, soil reaction, and the properties that are inferred from soil texture, such as available water capacity and fertility, affect plant growth. The ease of excavating, loading, and spreading is affected by rock fragments, slope, depth to a zone in which the soil moisture status is wet, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, depth to a zone in which the soil moisture status is wet, rock fragments, depth to bedrock or a cemented pan, and toxic material.

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

## Water Management

Table 21 gives information on the soil properties and site features that affect water management. The degree and kind of soil limitations are given for pond reservoir areas; embankments, dikes, and levees; and aquifer-fed excavated ponds. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

*Pond reservoir areas* hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is

determined by the permeability of the soil and the depth to fractured bedrock or other permeable material. Excessive slope can affect the storage capacity of the reservoir area.

*Embankments, dikes, and levees* are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow. Embankments that have zoned construction (core and shell) are not considered. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of about 5 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

The ratings do not indicate the ability of the natural soil to support an embankment. Soil properties to a depth even greater than the height of the embankment can affect performance and safety of the embankment. Generally, deeper onsite investigation is needed to determine these properties.

Soil material in embankments must be resistant to seepage, piping, and erosion and have favorable compaction characteristics. Unfavorable features include less than 5 feet of suitable material and a high content of stones or boulders, organic matter, or salts or sodium. A wet zone high in the soil profile affects the amount of usable material. It also affects trafficability.

*Aquifer-fed excavated ponds* are pits or dugouts that extend to a ground-water aquifer or to a depth below a permanent water table. Excluded are ponds that are fed only by surface runoff and embankment ponds that impound water 3 feet or more above the original surface. Excavated ponds are affected by depth to a zone in which the soil moisture status is wet, permeability of the aquifer, and quality of the water as inferred from the salinity of the soil. Depth to bedrock and the content of large stones affect the ease of excavation.

## Agricultural Waste Management

Soil properties are important considerations in areas where soils are used as sites for the treatment and disposal of organic waste and wastewater. Selection of soils with properties that favor waste management can help to prevent environmental damage.

Tables 22a and 22b show the degree and kind of soil limitations affecting the treatment of agricultural waste, including municipal and food-processing wastewater and effluent from lagoons or storage ponds. Municipal wastewater is the waste stream from a municipality. It contains domestic waste and may contain industrial waste. It may have received primary or secondary treatment. It is rarely untreated sewage. Food-processing wastewater results from the preparation of fruits, vegetables, milk, cheese, and meats for public consumption. In places it is high in content of sodium and chloride. In the context of these tables, the effluent in lagoons and storage ponds is from facilities used to treat or store food-processing wastewater or domestic or animal waste. Domestic and food-processing wastewater is very dilute, and the effluent from the facilities that treat or store it commonly is very low in content of carbonaceous and nitrogenous material; the content of nitrogen commonly ranges from 10 to 30 milligrams per liter. The wastewater from animal waste treatment lagoons or storage ponds, however, has much higher concentrations of these materials, mainly because the manure has not been diluted as much as the domestic waste. The content of nitrogen in this wastewater generally ranges from 50 to 2,000 milligrams per liter. When wastewater is applied, checks should be made to ensure that nitrogen, heavy metals, and salts are not added in excessive amounts.

The ratings in the tables are for waste management systems that not only dispose of and treat organic waste or wastewater but also are beneficial to crops (application of manure and food-processing waste and application of sewage sludge) and for waste



management systems that are designed only for the purpose of wastewater disposal and treatment (rapid infiltration of wastewater and slow rate treatment of wastewater).

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect agricultural waste management. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

*Rapid infiltration of wastewater* is a process in which wastewater applied in a level basin at a rate of 4 to 120 inches per week percolates through the soil. The wastewater may eventually reach the ground water. The application rate commonly exceeds the rate needed for irrigation of cropland. Vegetation is not a necessary part of the treatment; hence, the basins may or may not be vegetated. The thickness of the soil material needed for proper treatment of the wastewater is more than 72 inches. As a result, geologic and hydrologic investigation is needed to ensure proper design and performance and to determine the risk of ground-water pollution.

The ratings in the table are based on the soil properties that affect the risk of pollution and the design, construction, and performance of the system. Depth to a saturated zone, ponding, flooding, and depth to bedrock or a cemented pan affect the risk of pollution and the design and construction of the system. Slope, stones, and cobbles also affect design and construction. Permeability and reaction affect performance. Permanently frozen soils are unsuitable for waste treatment.

*Slow rate treatment of wastewater* is a process in which wastewater is applied to land at a rate normally between 0.5 inch and 4.0 inches per week. The application rate commonly exceeds the rate needed for irrigation of cropland. The applied wastewater is treated as it moves through the soil. Much of the treated water may percolate to the ground water, and some enters the atmosphere through evapotranspiration. The applied water generally is not allowed to run off the surface. Waterlogging is prevented either through control of the application rate or through the use of tile drains, or both.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, and the application of waste. The properties that affect absorption include the sodium adsorption ratio, depth to a saturated zone, ponding, available water capacity, permeability, depth to bedrock or a cemented pan, reaction, the cation-exchange capacity, and slope. Reaction, the sodium adsorption ratio, salinity, and bulk density affect plant growth and microbial activity. The wind erodibility group, the soil erodibility factor K, and slope are considered in estimating the likelihood of wind erosion or water erosion. Stones, cobbles, a wet zone in the soil profile, ponding, and flooding can hinder the application of waste. Permanently frozen soils are unsuitable for waste treatment.

*Application of manure and food-processing waste* not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. Manure is the excrement of livestock and poultry, and food-processing waste is damaged fruit and vegetables and the peelings, stems, leaves, pits, and soil particles removed in food preparation. The manure and the food-processing waste are either solid, slurry, or liquid. Their nitrogen content

varies. A high content of nitrogen limits the application rate. Toxic or otherwise dangerous wastes, such as those mixed with the lye used in food processing, are not considered in the ratings.

The ratings are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the waste is applied, and the method by which the waste is applied. The properties that affect absorption include permeability, depth to a saturated zone, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, and available water capacity. The properties that affect plant growth and microbial activity include reaction, the sodium adsorption ratio, salinity, and bulk density. The wind erodibility group, the soil erodibility factor K, and slope are considered in estimating the likelihood that wind erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a wet zone in the soil profile, ponding, and flooding can hinder the application of waste. Permanently frozen soils are unsuitable for waste treatment.

*Application of sewage sludge* not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. In the context of this table, sewage sludge is the residual product of the treatment of municipal sewage. The solid component consists mainly of cell mass, primarily bacteria cells that developed during secondary treatment and have incorporated soluble organics into their own bodies. The sludge has small amounts of sand, silt, and other solid debris. The content of nitrogen varies. Some sludge has constituents that are toxic to plants or hazardous to the food chain, such as heavy metals and exotic organic compounds, and should be analyzed chemically prior to use.

The content of water in the sludge ranges from about 98 percent to less than 40 percent. The sludge is considered liquid if it is more than about 90 percent water, slurry if it is about 50 to 90 percent water, and solid if it is less than about 50 percent water.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the sludge is applied, and the method by which the sludge is applied. The properties that affect absorption, plant growth, and microbial activity include permeability, depth to a saturated zone, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, available water capacity, reaction, salinity, and bulk density. The wind erodibility group, the soil erodibility factor K, and slope are considered in estimating the likelihood that wind erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a wet zone in the soil profile, ponding, and flooding can hinder the application of sludge. Permanently frozen soils are unsuitable for waste treatment.

Table 3.--Temperature and Precipitation

(Recorded in the period 1971-2000 at Spooner Experiment Farm, Wisconsin)

Month	Temperature						Precipitation				
	Average daily maximum	Average daily minimum	Average	2 years in 10 will have--		Average number of growing degree days*	Average	2 years in 10 will have--		Average number of days with 0.10 inch or more	Average snowfall
				Maximum temperature higher than--	Minimum temperature lower than--			Less than--	More than--		
°F	°F	°F	°F	°F	Units	In	In	In		In	
January----	21.5	-0.1	10.7	46	-36	0	0.87	0.39	1.33	2	13.8
February---	29.0	6.4	17.7	52	-33	2	.66	.22	1.04	2	7.5
March-----	40.6	18.7	29.7	67	-18	29	1.43	.78	2.02	3	8.3
April-----	56.6	31.5	44.1	81	7	187	2.20	.95	3.43	5	2.6
May-----	70.2	43.2	56.7	87	23	514	3.05	1.79	4.27	6	.0
June-----	77.6	52.2	64.9	91	32	743	3.98	2.72	5.15	7	.0
July-----	81.4	57.2	69.3	95	40	908	4.21	2.07	6.09	6	.0
August-----	78.9	55.1	67.0	92	36	837	4.64	2.83	6.33	7	.0
September--	69.7	46.7	58.2	87	27	545	3.68	1.81	5.45	7	.0
October----	57.8	35.9	46.9	80	15	247	2.58	1.42	3.68	6	.7
November---	39.1	22.8	31.0	65	-8	33	1.90	.72	2.92	4	7.8
December---	25.2	7.2	16.2	48	-28	1	.85	.38	1.27	2	11.0
Yearly:											
Average---	54.0	31.4	42.7	---	---	---	---	---	---	---	---
Extreme---	101	-44	---	95	-37	---	---	---	---	---	---
Total-----	---	---	---	---	---	4,048	30.05	24.95	35.02	57	51.8

\* A growing degree day is a unit of heat available for plant growth. It can be calculated by adding the maximum and minimum daily temperatures, dividing the sum by 2, and subtracting the temperature below which growth is minimal for the principal crops in the area (40 degrees F).

Table 4.--Freeze Dates in Spring and Fall  
(Recorded in the period 1971-2000 at Spooner Experiment Farm, Wisconsin)

Probability	Temperature		
	24 °F or lower	28 °F or lower	32 °F or lower
Last freezing temperature in spring:			
1 year in 10 later than--	May 6	May 20	June 9
2 years in 10 later than--	May 2	May 15	June 2
5 years in 10 later than--	Apr. 24	May 7	May 20
First freezing temperature in fall:			
1 year in 10 earlier than--	Sept. 30	Sept. 18	Sept. 10
2 years in 10 earlier than--	Oct. 5	Sept. 22	Sept. 14
5 years in 10 earlier than--	Oct. 16	Sept. 30	Sept. 22

Table 5.--Growing Season  
(Recorded in the period 1971-2000 at Spooner Experiment Farm, Wisconsin)

Probability	Daily minimum temperature during growing season		
	Higher than 24 °F	Higher than 28 °F	Higher than 32 °F
	Days	Days	Days
9 years in 10	150	126	102
8 years in 10	158	133	109
5 years in 10	174	145	123
2 years in 10	189	158	137
1 year in 10	197	164	144

Table 6.--Cropland Management Considerations

(See text for a description of the considerations listed in this table)

Map symbol and soil name	Cropland management considerations
3A: Totagatic-----	Flooding Excessive permeability High content of organic matter Limited available water capacity Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Bowstring-----	Flooding Excessive permeability High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Ausable-----	Flooding Excessive permeability High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
22A: Comstock-----	Acid soil Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
24A: Poskin-----	Excessive permeability Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
27A: Scott Lake-----	Excessive permeability Limited available water capacity Potential for ground-water contamination Wind erosion
28B: Haugen, very stony-----	Acid soil Dense layer Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Surface stones Water erosion Wet soil moisture status

Table 6.--Cropland Management Considerations--Continued

Map symbol and soil name	Cropland management considerations
28B:	
Haugen-----	Acid soil Dense layer Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Water erosion Wet soil moisture status Wind erosion
Rosholt, very stony-----	Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Surface stones Water erosion Wind erosion
Rosholt-----	Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
28C:	
Haugen, very stony-----	Acid soil Dense layer Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Surface stones Water erosion Wet soil moisture status Wind erosion
Haugen-----	Acid soil Dense layer Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Water erosion Wet soil moisture status Wind erosion
Rosholt, very stony-----	Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Surface stones Water erosion Wind erosion
Rosholt-----	Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion

Table 6.--Cropland Management Considerations--Continued

Map symbol and soil name	Cropland management considerations
33B: Chetek-----	Acid soil Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
33C: Chetek-----	Acid soil Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
38A: Rosholt-----	Excessive permeability Limited available water capacity Potential for ground-water contamination Wind erosion
38B: Rosholt-----	Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
38C: Rosholt-----	Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
38D: Rosholt-----	Slope Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
42D: Amery-----	Acid soil Slope Dense layer Potential for surface-water contamination Restricted permeability Surface stones Water erosion Wind erosion



Table 6.--Cropland Management Considerations--Continued

Map symbol and soil name	Cropland management considerations
43B: Antigo-----	Excessive permeability Potential for ground-water contamination Potential for surface-water contamination Water erosion
43C: Antigo-----	Excessive permeability Potential for ground-water contamination Potential for surface-water contamination Water erosion
43D: Antigo-----	Slope Excessive permeability Potential for ground-water contamination Potential for surface-water contamination Water erosion
48A: Brill-----	Excessive permeability Potential for ground-water contamination Wet soil moisture status
63A: Crystal Lake-----	Acid soil Potential for ground-water contamination Wet soil moisture status
63B: Crystal Lake-----	Acid soil Potential for ground-water contamination Potential for surface-water contamination Water erosion Wet soil moisture status
63C: Crystal Lake-----	Acid soil Potential for ground-water contamination Potential for surface-water contamination Water erosion Wet soil moisture status
63E: Crystal Lake-----	Acid soil Slope Potential for ground-water contamination Potential for surface-water contamination Water erosion
64A: Totagatic-----	Flooding Excessive permeability High content of organic matter Limited available water capacity Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status

Table 6.--Cropland Management Considerations--Continued

Map symbol and soil name	Cropland management considerations
64A: Winterfield-----	Flooding Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
69B: Keweenaw-----	Limited available water capacity Limited content of organic matter Potential for ground-water contamination Surface stones Wind erosion
Sayner-----	Acid soil Excessive permeability Limited available water capacity Potential for ground-water contamination Surface stones Wind erosion
Vilas-----	Excessive permeability Limited available water capacity Potential for ground-water contamination Surface stones Wind erosion
69C: Keweenaw-----	Limited available water capacity Limited content of organic matter Potential for ground-water contamination Surface stones Water erosion Wind erosion
Sayner-----	Acid soil Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Surface stones Water erosion Wind erosion
Vilas-----	Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Surface stones Water erosion Wind erosion
69E: Keweenaw-----	Slope Limited available water capacity Limited content of organic matter Potential for ground-water contamination Surface stones Water erosion Wind erosion

Table 6.--Cropland Management Considerations--Continued

Map symbol and soil name	Cropland management considerations
69E: Sayner-----	Acid soil Slope Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Surface stones Water erosion Wind erosion
Vilas-----	Slope Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Surface stones Water erosion Wind erosion
74B: Vilas-----	Excessive permeability Limited available water capacity Potential for ground-water contamination Wind erosion
74C: Vilas-----	Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
74D: Vilas-----	Slope Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
100B: Menahga-----	Acid soil Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Wind erosion
100C: Menahga-----	Acid soil Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion

Table 6.--Cropland Management Considerations--Continued

Map symbol and soil name	Cropland management considerations
100D: Menahga-----	Acid soil Slope Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
127D: Amery-----	Acid soil Slope Dense layer Potential for surface-water contamination Restricted permeability Surface stones Water erosion Wind erosion
Rosholt-----	Slope Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Surface stones Water erosion Wind erosion
127E: Amery-----	Acid soil Slope Dense layer Potential for surface-water contamination Restricted permeability Surface stones Water erosion Wind erosion
Rosholt-----	Slope Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Surface stones Water erosion Wind erosion
156B: Magnor, very stony-----	Acid soil Dense layer Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Surface stones Water erosion Wet soil moisture status

Table 6.--Cropland Management Considerations--Continued

Map symbol and soil name	Cropland management considerations
156B: Magnor-----	Acid soil Dense layer Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Water erosion Wet soil moisture status
157B: Freeon, very stony-----	Dense layer Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Surface stones Water erosion Wet soil moisture status
Freeon-----	Dense layer Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Water erosion Wet soil moisture status
157C: Freeon, very stony-----	Dense layer Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Surface stones Water erosion Wet soil moisture status
Freeon-----	Dense layer Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Water erosion Wet soil moisture status
160A: Oesterle-----	Excessive permeability Limited available water capacity Potential for ground-water contamination Wet soil moisture status Wind erosion
182B: Padus-----	Acid soil Excessive permeability Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
182C: Padus-----	Acid soil Excessive permeability Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion

Table 6.--Cropland Management Considerations--Continued

Map symbol and soil name	Cropland management considerations
192A: Worcester-----	Acid soil Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
193A: Minocqua-----	Excessive permeability High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
215B: Pence-----	Acid soil Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
215C: Pence-----	Acid soil Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
215D: Pence-----	Acid soil Slope Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
315A: Rib-----	Excessive permeability Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
337A: Plover-----	Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
368B: Mahtomedi-----	Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Wind erosion

Table 6.--Cropland Management Considerations--Continued

Map symbol and soil name	Cropland management considerations
368B: Cress-----	Acid soil Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Water erosion Wind erosion
368C: Mahtomedi-----	Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
Cress-----	Acid soil Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
368D: Mahtomedi-----	Slope Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
Cress-----	Acid soil Slope Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
371A: Croswell-----	Excessive permeability Limited available water capacity Potential for ground-water contamination Wet soil moisture status Wind erosion
380B: Cress-----	Acid soil Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Water erosion Wind erosion



Table 6.--Cropland Management Considerations--Continued

Map symbol and soil name	Cropland management considerations
380B: Rosholt-----	Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
380C: Cress-----	Acid soil Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
Rosholt-----	Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
380D: Cress-----	Acid soil Slope Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
Rosholt-----	Slope Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
383B: Mahtomedi-----	Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Wind erosion
383C: Mahtomedi-----	Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion

Table 6.--Cropland Management Considerations--Continued

Map symbol and soil name	Cropland management considerations
383D: Mahtomedi-----	Slope Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
396B: Friendship-----	Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Wind erosion
Wurtsmith-----	Acid soil Excessive permeability Limited available water capacity Potential for ground-water contamination Wet soil moisture status Wind erosion
Grayling-----	Acid soil Excessive permeability Limited available water capacity Potential for ground-water contamination Wind erosion
397A: Perchlake-----	Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Wet soil moisture status Wind erosion
399B: Grayling-----	Acid soil Excessive permeability Limited available water capacity Potential for ground-water contamination Wind erosion
399C: Grayling-----	Acid soil Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
399D: Grayling-----	Acid soil Slope Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion

Table 6.--Cropland Management Considerations--Continued

Map symbol and soil name	Cropland management considerations
405A:	
Lupton-----	High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Cathro-----	High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Tawas-----	Excessive permeability High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
406A:	
Loxley-----	Excessive permeability High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
407A:	
Seelyeville-----	High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Markey-----	Excessive permeability High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
410A:	
Seelyeville-----	High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Cathro-----	High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
412A:	
Rifle-----	High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status

Table 6.--Cropland Management Considerations--Continued

Map symbol and soil name	Cropland management considerations
412A: Tacoosh-----	High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
415A: Greenwood-----	High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
439B: Graycalm-----	Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Wind erosion
Menahga-----	Acid soil Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Wind erosion
439C: Graycalm-----	Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
Menahga-----	Acid soil Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
439D: Graycalm-----	Slope Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
Menahga-----	Acid soil Slope Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion

Table 6.--Cropland Management Considerations--Continued

Map symbol and soil name	Cropland management considerations
441C:	
Freeon-----	Dense layer Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Surface stones Water erosion Wet soil moisture status
Cathro-----	High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
442C:	
Haugen-----	Acid soil Dense layer Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Surface stones Water erosion Wet soil moisture status Wind erosion
Greenwood-----	Excessive permeability High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
443D:	
Amery-----	Acid soil Slope Dense layer Potential for surface-water contamination Restricted permeability Surface stones Water erosion Wind erosion
Greenwood-----	Excessive permeability High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
461A:	
Bowstring-----	Flooding Excessive permeability High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status

Table 6.--Cropland Management Considerations--Continued

Map symbol and soil name	Cropland management considerations
484A: Greenwood-----	Excessive permeability High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Beseman-----	High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
495B: Karlsborg-----	Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Wet soil moisture status Wind erosion
Grettum-----	Excessive permeability Limited available water capacity Potential for ground-water contamination Wind erosion
Perida-----	Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Wind erosion
495C: Karlsborg-----	Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Water erosion Wet soil moisture status Wind erosion
Grettum-----	Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
Perida-----	Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Water erosion Wind erosion

Table 6.--Cropland Management Considerations--Continued

Map symbol and soil name	Cropland management considerations
495D: Karlsborg-----	Slope Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Water erosion Wet soil moisture status Wind erosion
Grettum-----	Slope Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
Perida-----	Slope Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Water erosion Wind erosion
497A: Meenon-----	Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Wet soil moisture status Wind erosion
515A: Manitowish-----	Acid soil Excessive permeability Limited available water capacity Potential for ground-water contamination Wind erosion
521A: Dody-----	Excessive permeability High content of organic matter Limited available water capacity Ponding Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Wet soil moisture status
524E: Rock outcrop.	



Table 6.--Cropland Management Considerations--Continued

Map symbol and soil name	Cropland management considerations
524E: Frogcreek-----	Acid soil Dense layer Potential for ground-water contamination Potential for surface-water contamination Surface stones Water erosion Wet soil moisture status
Metonga-----	Acid soil Slope Depth to rock Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Surface stones Water erosion Wind erosion
542B: Haugen, very stony-----	Acid soil Dense layer Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Surface stones Water erosion Wet soil moisture status Wind erosion
Haugen-----	Acid soil Dense layer Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Water erosion Wet soil moisture status Wind erosion
542C: Haugen, very stony-----	Acid soil Dense layer Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Surface stones Water erosion Wet soil moisture status Wind erosion
Haugen-----	Acid soil Dense layer Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Water erosion Wet soil moisture status Wind erosion

Table 6.--Cropland Management Considerations--Continued

Map symbol and soil name	Cropland management considerations
543B: Anigon-----	Excessive permeability Potential for ground-water contamination Potential for surface-water contamination Water erosion
543C2: Anigon-----	Excessive permeability Potential for ground-water contamination Potential for surface-water contamination Previously eroded Water erosion
544F: Menahga-----	Acid soil Slope Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
Mahtomedi-----	Slope Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
555A: Fordum-----	Flooding Excessive permeability Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
574B: Sayner-----	Acid soil Excessive permeability Limited available water capacity Potential for ground-water contamination Wind erosion
574C: Sayner-----	Acid soil Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion

Table 6.--Cropland Management Considerations--Continued

Map symbol and soil name	Cropland management considerations
574E: Sayner-----	Acid soil Slope Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
579B: Parkfalls-----	Dense layer Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Surface stones Water erosion Wet soil moisture status Wind erosion
600A: Haplosaprists-----	Onsite investigation required
Psammaquents-----	Onsite investigation required
615B: Cress-----	Acid soil Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Water erosion Wind erosion
615C: Cress-----	Acid soil Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
615D: Cress-----	Acid soil Slope Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
623A: Capitola-----	High content of organic matter Limited available water capacity Ponding Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Surface stones Wet soil moisture status

Table 6.--Cropland Management Considerations--Continued

Map symbol and soil name	Cropland management considerations
624A: Ossmer-----	Excessive permeability Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
632A: Aftad-----	Potential for ground-water contamination Wet soil moisture status Wind erosion
632B: Aftad-----	Potential for ground-water contamination Potential for surface-water contamination Water erosion Wet soil moisture status Wind erosion
632C: Aftad-----	Potential for ground-water contamination Potential for surface-water contamination Water erosion Wet soil moisture status Wind erosion
633F: Pence-----	Acid soil Slope Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
Padus-----	Acid soil Slope Excessive permeability Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
648B: Sconsin-----	Dense layer Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Water erosion Wet soil moisture status
670C: Keweenaw-----	Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Surface stones Water erosion Wind erosion

Table 6.--Cropland Management Considerations--Continued

Map symbol and soil name	Cropland management considerations
670C: Pence-----	Acid soil Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Surface stones Water erosion Wind erosion
670E: Keweenaw-----	Slope Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Surface stones Water erosion Wind erosion
Pence-----	Acid soil Slope Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Surface stones Water erosion Wind erosion
671B: Spoonershill, stony-----	Dense layer Limited available water capacity Limited content of organic matter Potential for ground-water contamination Surface stones Water erosion Wet soil moisture status
Spoonershill-----	Dense layer Limited available water capacity Limited content of organic matter Potential for ground-water contamination Water erosion Wet soil moisture status
680B: Stanberry, stony-----	Dense layer Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Surface stones Water erosion Wet soil moisture status Wind erosion
Pence, stony-----	Acid soil Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Surface stones Water erosion Wind erosion

Table 6.--Cropland Management Considerations--Continued

Map symbol and soil name	Cropland management considerations
683A: Tipler-----	Acid soil Excessive permeability Limited available water capacity Potential for ground-water contamination Wind erosion
706A: Winterfield-----	Flooding Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
Totagatic-----	Flooding Excessive permeability Limited available water capacity Limited content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
724A: Rib-----	Excessive permeability Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Rock outcrop.	
726B: Sissabagama-----	Excessive permeability Limited available water capacity Potential for ground-water contamination Wind erosion
733A: Wozny-----	Dense layer High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Surface stones Wet soil moisture status
771A: Lenroot-----	Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Wet soil moisture status Wind erosion
827A: Scoba-----	Excessive permeability Limited available water capacity Potential for ground-water contamination Wet soil moisture status

Table 6.--Cropland Management Considerations--Continued

Map symbol and soil name	Cropland management considerations
853C: Frogcreek-----	Acid soil Dense layer Potential for ground-water contamination Potential for surface-water contamination Surface stones Water erosion Wet soil moisture status
Stinnett-----	Acid soil Dense layer Potential for ground-water contamination Potential for surface-water contamination Surface stones Water erosion Wet soil moisture status
Wozny-----	Dense layer High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Surface stones Wet soil moisture status
856B: Stinnett-----	Acid soil Dense layer Potential for ground-water contamination Potential for surface-water contamination Surface stones Water erosion Wet soil moisture status
857B: Frogcreek-----	Acid soil Dense layer Potential for ground-water contamination Potential for surface-water contamination Surface stones Water erosion Wet soil moisture status
857C: Frogcreek-----	Acid soil Dense layer Potential for ground-water contamination Potential for surface-water contamination Surface stones Water erosion Wet soil moisture status
873B: Stanberry-----	Dense layer Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Surface stones Water erosion Wet soil moisture status Wind erosion



Table 6.--Cropland Management Considerations--Continued

Map symbol and soil name	Cropland management considerations
873C: Stanberry-----	Dense layer Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Surface stones Water erosion Wet soil moisture status Wind erosion
873D: Stanberry-----	Slope Dense layer Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Surface stones Water erosion Wet soil moisture status Wind erosion
905A: Cublake-----	Acid soil Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Wind erosion
926A: Flink-----	Acid soil Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Wet soil moisture status Wind erosion
943D: Stanberry-----	Slope Dense layer Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Surface stones Water erosion Wet soil moisture status Wind erosion
Greenwood-----	High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
948A: Billyboy-----	Excessive permeability Potential for ground-water contamination Wet soil moisture status

Table 6.--Cropland Management Considerations--Continued

Map symbol and soil name	Cropland management considerations
970C:	
Keweenaw-----	Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Surface stones Water erosion
Pence-----	Acid soil Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Surface stones Water erosion Wind erosion
Greenwood-----	Excessive permeability High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
970E:	
Keweenaw-----	Slope Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Surface stones Water erosion
Pence-----	Acid soil Slope Excessive permeability Limited available water capacity Potential for ground-water contamination Potential for surface-water contamination Surface stones Water erosion Wind erosion
Greenwood-----	Excessive permeability High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
1070C:	
Fremstadt-----	Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Surface stones Water erosion

Table 6.--Cropland Management Considerations--Continued

Map symbol and soil name	Cropland management considerations
1070C: Cress-----	Acid soil Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
1070D: Fremstadt-----	Slope Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Surface stones Water erosion
Cress-----	Acid soil Slope Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Water erosion Wind erosion
1080B: Spoonershill-----	Dense layer Limited available water capacity Limited content of organic matter Potential for ground-water contamination Water erosion Wet soil moisture status
Spoonershill, stony-----	Dense layer Limited available water capacity Limited content of organic matter Potential for ground-water contamination Surface stones Water erosion Wet soil moisture status
Cress-----	Acid soil Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Water erosion Wind erosion
1653C: Stanberry-----	Dense layer Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Surface stones Water erosion Wet soil moisture status Wind erosion

Table 6.--Cropland Management Considerations--Continued

Map symbol and soil name	Cropland management considerations
1653C: Parkfalls-----	Dense layer Limited available water capacity Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Surface stones Water erosion Wet soil moisture status Wind erosion
Wozny-----	Dense layer High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Surface stones Wet soil moisture status
2015. Pits	
2050. Landfill	
3011A: Barronett-----	Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
3125A: Meehan-----	Excessive permeability Limited available water capacity Potential for ground-water contamination Wet soil moisture status Wind erosion
3126A: Wurtsmith-----	Acid soil Excessive permeability Limited available water capacity Potential for ground-water contamination Wet soil moisture status Wind erosion
3276A: Au Gres-----	Acid soil Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Wet soil moisture status Wind erosion
3312B: Glendenning, very stony-----	Acid soil Dense layer Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Surface stones Water erosion Wet soil moisture status

Table 6.--Cropland Management Considerations--Continued

Map symbol and soil name	Cropland management considerations
3312B: Glendenning-----	Acid soil Dense layer Limited content of organic matter Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Water erosion Wet soil moisture status
3336A: Fenander-----	Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status Wind erosion
3403A: Loxley-----	Excessive permeability High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Beseman-----	High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
Dawson-----	Acid soil Excessive permeability High content of organic matter Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
3424C: Frogcreek-----	Acid soil Dense layer Potential for ground-water contamination Potential for surface-water contamination Surface stones Water erosion Wet soil moisture status
Magroc-----	Dense layer Potential for ground-water contamination Potential for surface-water contamination Restricted permeability Surface stones Water erosion Wet soil moisture status
Stinnett-----	Acid soil Dense layer Potential for ground-water contamination Potential for surface-water contamination Surface stones Water erosion Wet soil moisture status
Rock outcrop.	

Table 6.--Cropland Management Considerations--Continued

Map symbol and soil name	Cropland management considerations
3446A: Newson-----	Acid soil Excessive permeability High content of organic matter Limited available water capacity Ponding Potential for ground-water contamination Potential for surface-water contamination Wet soil moisture status
3448B: Grettum-----	Excessive permeability Limited available water capacity Potential for ground-water contamination Wind erosion
3448C: Grettum-----	Excessive permeability Limited available water capacity Potential for ground-water contamination Water erosion Wind erosion
3516A: Slimlake-----	Excessive permeability Limited available water capacity Potential for ground-water contamination Wind erosion
3629B: Perida-----	Excessive permeability Limited available water capacity Limited content of organic matter Potential for ground-water contamination Restricted permeability Wind erosion
M-W. Miscellaneous water	
W. Water	

Table 7.--Land Capability and Yields per Acre of Crops and Pasture

(Yields are those that can be expected under a high level of management. They are for nonirrigated areas. Yields for very stony map units are based on the assumption that the stones have been removed. Absence of a yield symbol indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)

Map symbol and soil name	Land capability	Soybeans		Timothy-red clover hay		Brome-grass- alfalfa hay		Corn	Corn silage	
		Bu	Tons	Bu	Tons	Bu	Tons		Bu	Tons
3A-----										
Totagatic-----	7w	---	---					---		---
Bowstring-----	7w									
Ausable-----	7w									
22A-----	2w	30	3.4					90		14
Comstock										
24A-----	2w	28	3.2					85		14
Poskin										
27A-----	2s	28	3.2					85		14
Scott Lake										
28B-----		28	3.2					85		14
Haugen, very stony-----	4s									
Haugen-----	2e									
Rosholt, very stony-----	4s									
Rosholt-----	2s									
28C-----		26	3.0					80		13
Haugen, very stony-----	6s									
Haugen-----	3e									
Rosholt, very stony-----	6s									
Rosholt-----	3e									
33B-----	3s	22	2.6					70		12
Chetek										
33C-----	4e	20	2.4					65		12
Chetek										
38A-----	2s	28	3.2					85		14
Rosholt										
38B-----	2s	26	3.0					80		13
Rosholt										
38C-----	3e	24	2.8					75		13
Rosholt										

\* See footnote at end of table.



Table 7.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Soybeans	Timothy-red clover hay	Brome-grass- alfalfa hay	Corn	Corn silage
38D----- Rosholt	4e	Bu 22	Tons 2.6	Tons 2.8	Bu 70	Tons 12
42D----- Amery	6s	24	2.8	3.0	75	13
43B----- Antigo	2e	30	3.4	3.6	90	14
43C----- Antigo	3e	28	3.2	3.4	85	14
43D----- Antigo	6e	26	3.0	3.2	80	13
48A----- Brill	2s	30	3.4	3.6	90	14
63A----- Crystal Lake	1	34	3.6	4.0	100	15
63B----- Crystal Lake	2e	32	3.6	3.8	95	15
63C----- Crystal Lake	3e	30	3.4	3.6	90	14
63E----- Crystal Lake	6e	28	3.2	3.4	85	14
64A----- Totagatic- Winterfield	7w 4w	---	---	---	---	---
69B----- Keweenaw- Sayner- Vilas	3s 4s 4s	---	1.6	---	45	10
69C----- Keweenaw- Sayner- Vilas	4s 6s 6s	---	1.6	1.6	40	9

\* See footnote at end of table.

Table 7.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Soybeans	Timothy-red clover hay	Bromegrass- alfalfa hay	Corn	Corn silage	Ke bl
		Bu	Tons	Tons	Bu	Tons	
69E----- Keweenaw----- Sayner----- Vilas-----	7s 7s 7s	---	1.2	1.4	35	9	
74B----- Vilas	4s	---	1.8	---	50	10	
74C----- Vilas	6s	---	1.8	2.0	50	10	
74D----- Vilas	7s	---	1.4	1.6	40	9	
100B----- Menahga	4s	---	1.4	1.6	40	9	
100C----- Menahga	6s	---	1.2	1.4	35	9	
100D----- Menahga	7s	---	1.0	1.2	30	8	
127D----- Amery----- Rosholt-----	6s 6s	24	2.8	3.0	75	13	
127E----- Amery----- Rosholt-----	7s 7s	---	---	---	---	---	
156B----- Magnor, very stony----- Magnor-----	4s 2w	28	3.2	3.4	85	14	
157B----- Freeon, very stony----- Freeon-----	4s 2e	32	3.6	3.8	95	15	
157C----- Freeon, very stony----- Freeon-----	6s 3e	30	3.4	3.6	90	14	
160A----- Oosterle	2w	26	3.0	3.2	80	13	

\* See footnote at end of table.

Table 7.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Soybeans	Timothy-red clover hay	Brome-grass- alfalfa hay	Corn	Corn silage	K b
182B----- Padus	2e	Bu 30	Tons 3.4	Tons ---	Bu 90	Tons 14	
182C----- Padus	3e	28	3.2	---	85	14	
192A----- Worcester	2w	26	3.0	---	80	13	
193A----- Minocqua	6w	---	---	---	---	---	
215B----- Pence	3s	24	2.8	---	75	13	
215C----- Pence	4e	22	2.6	---	70	12	
215D----- Pence	6e	---	1.8	2.0	50	10	
315A----- Rib	6w	---	---	---	---	---	
337A----- Plover	2w	26	3.0	3.2	80	13	
368B----- Mahtomedi- Cress-	4s 3s	16	1.8	2.0	50	10	
368C----- Mahtomedi- Cress-	6s 4e	16	1.6	1.8	45	10	
368D----- Mahtomedi- Cress-	7s 6e	14	1.4	1.6	40	9	
371A----- Croswell	4s	---	2.0	---	55	11	
380B----- Cress- Rosholt-	3s 2s	22	2.6	2.8	70	12	

\* See footnote at end of table.

Table 7.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Soybeans	Timothy-red clover hay	Bromegrass- alfalfa hay	Corn	Corn silage	Ke bl
		Bu	Tons	Tons	Bu	Tons	
380C----- Cress----- Rosholt-----	4e 3e	20	2.4	2.6	65	12	
380D----- Cress----- Rosholt-----	6e 4e	18	2.2	2.4	60	11	
383B----- Mahtomedi	4s	14	1.4	1.6	40	9	
383C----- Mahtomedi	6s	14	1.2	1.4	35	9	
383D----- Mahtomedi	7s	---	1.0	1.2	30	8	
396B----- Friendship----- Wurtsmith----- Grayling-----	4s 4s 4s	---	1.4	1.6	40	9	
397A----- Perchlake	4w	18	2.0	2.2	55	11	
399B----- Grayling	4s	---	1.2	1.4	35	9	
399C----- Grayling	6s	---	1.0	1.2	30	8	
399D----- Grayling	7s	---	0.8	1.0	25	7	
405A----- Lupton----- Cathro----- Tawas-----	7w 7w 7w	---	---	---	---	---	
406A----- Loxley	7w	---	---	---	---	---	
407A----- Seelyeville----- Markey-----	7w 7w	---	---	---	---	---	

\* See footnote at end of table.

Table 7.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Soybeans	Timothy-red clover hay	Brome-grass- alfalfa hay	Corn	Corn silage	K b
410A----- Seelyeville----- Cathro-----	7w 7w	Bu --- ---	Tons --- ---	Tons ---	Bu ---	Tons ---	
412A----- Rifle----- Tacoosh-----	7w 7w	--- ---	--- ---	---	---	---	
415A----- Greenwood	7w	---	---	---	---	---	
439B----- Graycalm----- Menahga-----	4s 4s	16	1.8	2.0	50	10	
439C----- Graycalm----- Menahga-----	6s 6s	14	1.6	1.8	45	10	
439D----- Graycalm----- Menahga-----	7s 7s	---	1.4	1.6	40	9	
441C----- Freeon----- Cathro-----	6s 7w	30	3.4	3.6	90	14	
442C----- Haugen----- Greenwood-----	6s 7w	26	3.0	3.2	80	13	
443D----- Amery----- Greenwood-----	7s 7w	24	2.8	3.0	75	13	
461A----- Bowstring	7w	---	---	---	---	---	
484A----- Greenwood----- Beseman-----	7w 7w	---	---	---	---	---	
495B----- Karlsborg----- Grettum----- Perida-----	3s 4s 4s	18	2.0	2.2	55	11	

\* See footnote at end of table.

Table 7.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Soybeans	Timothy-red clover hay	Bromegrass- alfalfa hay	Corn	Corn silage	Ke bl
		Bu	Tons	Tons	Bu	Tons	
495C-----							
Karlsborg-----	4s	16	1.8	2.0	50	10	
Grettum-----	6s						
Perida-----	6s						
495D-----							
Karlsborg-----	6s	16	1.8	1.8	45	10	
Grettum-----	7s						
Perida-----	7s						
497A-----	4w	20	2.4	2.6	65	12	
Meenon							
515A-----	3s	24	2.8	---	75	13	
Manitowish							
521A-----	6w	---	---	---	---	---	
Dody							
524E-----		---	---	---	---	---	
Rock outcrop-----	8s						
Frogcreek-----	6s						
Metonga-----	7s						
542B-----		28	3.2	3.4	85	14	
Haugen, very stony-----	4s						
Haugen-----	2e						
542C-----		26	3.0	3.2	80	13	
Haugen, very stony-----	6s						
Haugen-----	3e						
543B-----	2e	32	3.6	3.8	95	15	
Anigon							
543C2-----	3e	30	3.4	3.6	90	14	
Anigon							
544F-----		---	---	---	---	---	
Menahga-----	7s						
Mahtomedi-----	7s						
555A-----	6w	---	---	---	---	---	
Fordum							

\* See footnote at end of table.

Table 7.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Soybeans	Timothy-red clover hay	Brome-grass- alfalfa hay	Corn	Corn silage	K b
574B----- Sayner	4s	Bu ---	Tons 1.6	Tons ---	Bu 45	Tons 10	
574C----- Sayner	6s	---	1.2	1.4	35	9	
574E----- Sayner	7s	---	1.0	1.2	30	8	
579B----- Parkfalls	4s	24	2.8	3.0	75	13	
600A----- Haplosaprists- Psammaquents-----	6w 6w	---	---	---	---	---	
615B----- Cress	3s	18	2.2	2.4	60	11	
615C----- Cress	4e	18	2.0	2.2	55	11	
615D----- Cress	6e	16	1.8	2.0	50	10	
623A----- Capitola	7w	---	---	---	---	---	
624A----- Ossmer	2w	28	3.2	3.4	85	14	
632A----- Aftad	1	34	3.8	4.0	100	15	
632B----- Aftad	2e	32	3.6	3.8	95	15	
632C----- Aftad	3e	30	3.4	3.6	90	14	
633F----- Pence----- Padus-----	7e 7e	---	---	---	---	---	
648B----- Sconsin	2e	28	3.2	3.4	85	14	

\* See footnote at end of table.

Table 7.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Soybeans	Timothy-red clover hay	Bromegrass- alfalfa hay	Corn	Corn silage	Ke bl
		Bu	Tons	Tons	Bu	Tons	
670C----- Keweenaw----- Pence----- 4e 4e	4e 4e	20	2.4	---	65	12	
670E----- Keweenaw----- Pence----- 7e 7e	7e 7e	---	---	---	---	---	
671B----- Spoonershill, stony----- Spoonershill----- 3s 3s	3s 3s	20	2.2	2.4	65	12	
680B----- Stanberry, stony----- Pence, stony----- 4s 4s	4s 4s	28	3.2	---	85	14	
683A----- Tipler	2s	28	3.2	---	85	14	
706A----- Winterfield----- Totagatic----- 4w 7w	4w 7w	---	---	---	---	---	
724A----- Rib----- Rock outcrop----- 6w 8s	6w 8s	---	---	---	---	---	
726B----- Sissabagama	4s	18	2.2	2.4	60	11	
733A----- Wozny	6w	---	---	---	---	---	
771A----- Lenroot	4s	16	1.8	2.0	50	10	
827A----- Scoba	2s	28	3.2	3.4	85	14	
853C----- Frogcreek----- Stinnett----- Wozny----- 6s 4s 6w	6s 4s 6w	26	3.0	---	80	13	
856B----- Stinnett	4s	28	3.2	---	85	14	

\* See footnote at end of table.



Table 7.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Soybeans	Timothy-red clover hay	Brome-grass- alfalfa hay	Corn	Corn silage	K b
857B----- Frogcreek	4s	Bu 30	Tons 3.4	Tons ---	Bu 90	Tons 14	
857C----- Frogcreek	6s	28	3.2	---	85	14	
873B----- Stanberry	4s	30	3.4	---	90	14	
873C----- Stanberry	6s	28	3.2	---	85	14	
873D----- Stanberry	7s	---	2.6	2.8	70	12	
905A----- Cublake	4s	---	2.0	2.2	55	11	
926A----- Flink	4w	---	2.2	2.4	60	11	
943D----- Stanberry- Greenwood	6s 7w	---	---	---	---	---	
948A----- Billyboy	2s	---	3.2	3.4	85	14	
970C----- Keweenaw- Pence- Greenwood	4e 4e 7w	---	1.8	2.0	50	10	
970E----- Keweenaw- Pence- Greenwood	7e 7e 7w	---	---	---	---	---	
1070C----- Fremstadt- Cress	4e 4e	18	2.0	2.2	55	11	
1070D----- Fremstadt- Cress	6e 6e	16	1.8	2.0	50	10	

\* See footnote at end of table.

Table 7.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Soybeans	Timothy-red clover hay	Bromegrass- alfalfa hay	Corn	Corn silage
		Bu	Tons	Tons	Bu	Tons
1080B----- Spoonershill----- Spoonershill, stony----- Cress-----	3s 3s 3s	18	2.2	2.4	60	11
1653C----- Stanberry----- Parkfalls----- Wozny-----	6s 4s 6w	24	2.8	---	75	13
2015----- Pits	8s	---	---	---	---	---
2050. Landfill						
3011A----- Barronett	6w	---	---	---	---	---
3125A----- Meehan	4w	18	2.0	---	55	11
3126A----- Wurtsmith	4s	16	1.8	2.0	50	10
3276A----- Au Gres	4w	---	1.8	---	50	10
3312B----- Glendenning, very stony Glendenning-----	4s 2w	26	3.0	3.2	80	13
3336A----- Fenander	6w	---	---	---	---	---
3403A----- Loxley----- Beseman----- Dawson-----	7w 7w 7w	---	---	---	---	---
3424C----- Frogcreek----- Magroc----- Stinnett----- Rock outcrop-----	6s 4s 4s 8s	---	---	---	---	---

\* See footnote at end of table.

Table 7.--Land Capability and Yields per Acre of Crops and Pasture--Continued

Map symbol and soil name	Land capability	Soybeans	Timothy-red clover hay	Brome-grass- alfalfa hay	Corn	Corn silage
		Bu	Tons	Tons	Bu	Tons
3446A----- Newson	6w	---	---	---	---	---
3448B----- Grettum	4s	16	1.6	1.8	45	10
3448C----- Grettum	6s	14	1.4	1.6	40	9
3516A----- Slimlake	3s	20	2.4	2.6	65	12
3629B----- Perida	4s	16	1.8	2.0	50	10
M-W. Miscellaneous water						
W. Water						

\* Animal unit month: The amount of forage or feed required to feed one animal unit (one cow, one horse, sheep, or five goats) for 30 days.

Table 8.--Prime Farmland

(Only the soils considered prime farmland are listed. Urban or built-up areas of the soils listed are not considered prime farmland. If a soil is prime farmland only under certain conditions, the conditions are specified in parentheses after the soil name)

Map symbol	Soil name
22A	Comstock silt loam, 0 to 3 percent slopes
24A	Poskin silt loam, 0 to 3 percent slopes
27A	Scott Lake sandy loam, 0 to 3 percent slopes
28B	Haugen-Rosholt complex, 2 to 6 percent slopes, very stony
38A	Rosholt sandy loam, 0 to 2 percent slopes
38B	Rosholt sandy loam, 2 to 6 percent slopes
43B	Antigo silt loam, 1 to 6 percent slopes
48A	Brill silt loam, 0 to 3 percent slopes
63A	Crystal Lake silt loam, 0 to 2 percent slopes
63B	Crystal Lake silt loam, 2 to 6 percent slopes
156B	Magnor, very stony-Magnor complex, 0 to 4 percent slopes
157B	Freeon, very stony-Freeon complex, 2 to 6 percent slopes
160A	Oesterle sandy loam, 0 to 2 percent slopes
182B	Padus sandy loam, 0 to 6 percent slopes
192A	Worcester sandy loam, 0 to 3 percent slopes
193A	Minocqua muck, 0 to 2 percent slopes
315A	Rib silt loam, 0 to 2 percent slopes
337A	Plover fine sandy loam, 0 to 3 percent slopes
542B	Haugen, very stony-Haugen complex, 2 to 6 percent slopes
543B	Anigon silt loam, 2 to 6 percent slopes
579B	Parkfalls sandy loam, 0 to 4 percent slopes, very stony
623A	Capitola muck, 0 to 2 percent slopes, very stony
624A	Ossmer silt loam, 0 to 3 percent slopes
632A	Aftad fine sandy loam, 0 to 2 percent slopes
632B	Aftad fine sandy loam, 2 to 6 percent slopes
648B	Sconsin silt loam, 1 to 6 percent slopes
683A	Tipler sandy loam, 0 to 3 percent slopes
733A	Wozny muck, 0 to 2 percent slopes, very stony
827A	Scoba sandy loam, 0 to 3 percent slopes
856B	Stinnett silt loam, 0 to 4 percent slopes, very stony
857B	Frogcreek silt loam, 2 to 6 percent slopes, very stony
873B	Stanberry sandy loam, 1 to 6 percent slopes, very stony
948A	Billyboy silt loam, 0 to 3 percent slopes
3011A	Barronett silt loam, 0 to 2 percent slopes
3312B	Glendenning, very stony-Glendenning complex, 0 to 4 percent slopes
3336A	Fenander fine sandy loam, 0 to 2 percent slopes

Table 9.--Windbreaks and Environmental Plantings

(Absence of an entry indicates that trees generally do not grow to the given height)

Map symbol and soil name	<8	Trees having predicted 20-year average height, in feet, of--			
		8-15	16-25	26-35	
3A. Totagatic-Bowstring- Ausable					
22A: Comstock-----	---	American cranberrybush, common lilac, silky dogwood, nannyberry, northern white- cedar, redosier dogwood	White spruce-----	Eastern white pine, red maple, red pine, silver maple white ash	
24A: Poskin-----	---	American cranberrybush, common lilac, silky dogwood, common ninebark, nannyberry, northern white- cedar, redosier dogwood	White spruce-----	Eastern white pine, red maple, silver maple, white ash	
27A: Scott Lake-----	Siberian peashrub, gray dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine	
28B: Haugen, very stony-----	---	American cranberrybush, Siberian peashrub, common lilac, Amur maple, eastern arborvitae	Manchurian crabapple, eastern redcedar, white spruce	Eastern white pine, green ash, jack pine	
Haugen-----	---	American cranberrybush, Siberian peashrub, common lilac, Amur maple, eastern arborvitae	Manchurian crabapple, eastern redcedar, white spruce	Eastern white pine, green ash, jack pine	

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	
28B: Rosholt, very stony-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine	
Rosholt-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine	
28C: Haugen, very stony-----	Gray dogwood-----	American cranberrybush, Amur maple, common lilac	Eastern arborvitae, Black Hills spruce, Norway spruce, white spruce	Eastern white pine, red maple, red pine, white ash	
Haugen-----	---	American cranberrybush, Siberian peashrub, common lilac, Amur maple, eastern arborvitae	Manchurian crabapple, eastern redcedar, white spruce	Eastern white pine, green ash, jack pine	
Rosholt, very stony-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine	
Rosholt-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine	
33B: Chetek-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine	

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	
33C: Chetek-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine	
38A: Rosholt-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine	
38B: Rosholt-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine	
38C: Rosholt-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine	
38D: Rosholt-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine	
42D: Amery-----	Gray dogwood-----	American cranberrybush, Amur maple, common lilac	Eastern arborvitae, Black Hills spruce, Norway spruce, white spruce	Eastern white pine, red maple, red pine, white ash	

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--			
	<8	8-15	16-25	26-35
43B: Antigo-----	Manyflower cotoneaster	American cranberrybush, Amur maple, common lilac, Siberian peashrub, gray dogwood, northern white-cedar, silky dogwood	Norway spruce-----	Eastern white pine, jack pine, red pine
43C: Antigo-----	Manyflower cotoneaster	American cranberrybush, Amur maple, common lilac, Siberian peashrub, gray dogwood, northern white-cedar, silky dogwood	Norway spruce-----	Eastern white pine, jack pine, red pine
43D: Antigo-----	Manyflower cotoneaster	American cranberrybush, Amur maple, common lilac, Siberian peashrub, gray dogwood, northern white-cedar, silky dogwood	Norway spruce-----	Eastern white pine, jack pine, red pine
48A: Brill-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac, Siberian peashrub, gray dogwood, northern white-cedar, silky dogwood	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine
63A: Crystal Lake-----	---	American cranberrybush, Amur maple, common lilac, gray dogwood, northern white-cedar	Black Hills spruce, Norway spruce, white spruce	Eastern white pine, red maple, red pine, white ash



Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	
63B: Crystal Lake-----	---	American cranberrybush, Amur maple, common lilac, gray dogwood, northern white-cedar	Black Hills spruce, Norway spruce, white spruce	Eastern white pine, red maple, red pine, white ash	
63C: Crystal Lake-----	---	American cranberrybush, Amur maple, common lilac, gray dogwood, northern white-cedar	Black Hills spruce, Norway spruce, white spruce	Eastern white pine, red maple, red pine, white ash	
63E: Crystal Lake-----	---	Amur maple, common lilac, gray dogwood, northern white-cedar	Black Hills spruce, Norway spruce, white spruce	Eastern white pine, red maple, red pine, white ash	
64A. Totagatic-Winterfield					
69B: Keweenaw.					
Sayner-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine	
Vilas-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine	
69C: Keweenaw.					

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	
69C: Sayner-----	Siberian peashrub,	American	Eastern redcedar,	Eastern white pine,	
	gray dogwood,	cranberrybush, Amur	Norway spruce	jack pine, red pine,	
	manflower	maple, common lilac			
	cotoneaster, silky				
	dogwood				
Vilas-----	Siberian peashrub,	American	Eastern redcedar,	Eastern white pine,	
	gray dogwood,	cranberrybush, Amur	Norway spruce	jack pine, red pine,	
	manflower	maple, common lilac			
	cotoneaster, silky				
	dogwood				
69E: Keweenaw.					
Sayner-----	Siberian peashrub,	American	Eastern redcedar,	Eastern white pine,	
	gray dogwood,	cranberrybush, Amur	Norway spruce	jack pine, red pine,	
	manflower	maple, common lilac			
	cotoneaster, silky				
	dogwood				
Vilas-----	Siberian peashrub,	American	Eastern redcedar,	Eastern white pine,	
	gray dogwood,	cranberrybush, Amur	Norway spruce	jack pine, red pine,	
	manflower	maple, common lilac			
	cotoneaster, silky				
	dogwood				
74B: Vilas-----	Siberian peashrub,	American	Eastern redcedar,	Eastern white pine,	
	gray dogwood,	cranberrybush, Amur	Norway spruce	jack pine, red pine,	
	manflower	maple, common lilac			
	cotoneaster, silky				
	dogwood				
74C: Vilas-----	Siberian peashrub,	American	Eastern redcedar,	Eastern white pine,	
	gray dogwood,	cranberrybush, Amur	Norway spruce	jack pine, red pine,	
	manflower	maple, common lilac			
	cotoneaster, silky				
	dogwood				
74D: Vilas-----	Siberian peashrub,	American	Eastern redcedar,	Eastern white pine,	
	gray dogwood,	cranberrybush, Amur	Norway spruce	jack pine, red pine,	
	manflower	maple, common lilac			
	cotoneaster, silky				
	dogwood				
74D: Vilas-----	Siberian peashrub,	American	Eastern redcedar,	Eastern white pine,	
	gray dogwood,	cranberrybush, Amur	Norway spruce	jack pine, red pine,	
	manflower	maple, common lilac			
	cotoneaster, silky				
	dogwood				

Table 9.---Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	
100B: Menahga-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine	
100C: Menahga-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine	
100D: Menahga-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine	
127D: Amery-----	Gray dogwood-----	American cranberrybush, Amur maple, common lilac	Eastern arborvitae, Black Hills spruce, Norway spruce, white spruce	Eastern white pine, red maple, red pine, white ash	
Rosholt-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine	
127E: Amery-----	Gray dogwood-----	American cranberrybush, Amur maple, common lilac	Eastern arborvitae, Black Hills spruce, Norway spruce, white spruce	Eastern white pine, red maple, red pine, white ash	
Rosholt-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine	
156B: Magnor, very stony.					

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	
156B: Magnor-----	---	American cranberrybush, common lilac, nannyberry, northern white- cedar, redosier dogwood, silky dogwood	White spruce-----	Eastern white pine, red maple, red pine, silver maple white ash	
157B: Freeon, very stony.					
Freeon-----	---	American cranberrybush, Amur maple, common lilac, northern white-cedar	Black Hills spruce, Norway spruce, white spruce	Eastern white pine, red maple, red pine, white ash	
157C: Freeon, very stony.					
Freeon-----	---	American cranberrybush, Amur maple, common lilac, gray dogwood, northern white-cedar	Black Hills spruce, Norway spruce, white spruce	Eastern white pine, red maple, red pine, white ash	
160A: Oesterle-----	Nannyberry, redosier dogwood	American cranberrybush, common lilac, silky dogwood	Eastern arborvitae, white spruce	Eastern white pine, red maple, red pine, silver maple white ash	
182B: Padus-----	Manyflower cotoneaster	American cranberrybush, Amur maple, common lilac, Siberian peashrub, gray dogwood, northern white-cedar, silky dogwood	Norway spruce-----	Eastern white pine, jack pine, red pin	

Table 9.---Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	
182C: Padus-----	Manyflower cotoneaster	American cranberrybush, Amur maple, common lilac, Siberian peashrub, gray dogwood, northern white-cedar, silky dogwood	Norway spruce-----	Eastern white pine, jack pine, red pine	
192A: Worcester-----		American cranberrybush, common lilac, silky dogwood, common ninebark, nannyberry, northern white- cedar, redosier dogwood	White spruce-----	Eastern white pine, red maple, silver maple, white ash	
193A. Minocqua					
215B: Pence-----		American cranberrybush, Amur maple, common lilac, Siberian peashrub, gray dogwood, northern white-cedar, silky dogwood	Norway spruce-----	Eastern white pine, jack pine, red pine	
215C: Pence-----		American cranberrybush, Amur maple, common lilac, Siberian peashrub, gray dogwood, northern white-cedar, silky dogwood	Norway spruce-----	Eastern white pine, jack pine, red pine	

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--			
	<8	8-15	16-25	26-35
215D: Pence-----	Manyflower cotoneaster	American cranberrybush, Amur maple, common lilac, Siberian peashrub, gray dogwood, northern white-cedar, silky dogwood	Norway spruce-----	Eastern white pine, jack pine, red pine
315A. Rib				
337A: Plover-----	---	American cranberrybush, common lilac, nannyberry, northern white- cedar, redosier dogwood, silky dogwood	White spruce-----	Eastern white pine, red maple, red pine, silver maple white ash
368B: Mahtomedi-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine
Cress-----	Siberian peashrub, common lilac	Manchurian crabapple, Siberian crabapple, eastern redcedar	Russian olive, green ash, jack pine, red pine	Siberian elm, eastern white pine
368C: Mahtomedi-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine
Cress-----	Siberian peashrub, common lilac	Manchurian crabapple, Siberian crabapple, eastern redcedar	Russian olive, green ash, jack pine, red pine	Siberian elm, eastern white pine

Table 9.---Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	
368D: Mahtomedi-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine	
Cress-----	Siberian peashrub, common lilac	Manchurian crabapple, Siberian crabapple, eastern redcedar	Russian olive, green ash, jack pine, red pine	Siberian elm, eastern white pine	
371A: Croswell-----	Siberian peashrub, manyflower cotoneaster	Amur maple, common lilac	Eastern redcedar, jack pine, red pine	Eastern white pine	
380B: Cress-----	Siberian peashrub, common lilac	Manchurian crabapple, Siberian crabapple, eastern redcedar	Russian olive, green ash, jack pine, red pine	Siberian elm, eastern white pine	
Rosholt-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine	
380C: Cress-----	Siberian peashrub, common lilac	Manchurian crabapple, Siberian crabapple, eastern redcedar	Russian olive, green ash, jack pine, red pine	Siberian elm, eastern white pine	
Rosholt-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine	
380D: Cress-----	Siberian peashrub, common lilac	Manchurian crabapple, Siberian crabapple, eastern redcedar	Russian olive, green ash, jack pine, red pine	Siberian elm, eastern white pine	

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	
380D: Rosholt-----	Siberian peashrub, gray dogwood, manflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine	
383B: Mahtomedi-----	Siberian peashrub, gray dogwood, manflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine	
383C: Mahtomedi-----	Siberian peashrub, gray dogwood, manflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine	
383D: Mahtomedi-----	Siberian peashrub, gray dogwood, manflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine	
396B: Friendship.					
Wurtsmith-----	Siberian peashrub, manflower cotoneaster	Amur maple, common lilac	Eastern redcedar, jack pine, red pine	Eastern white pine	
Grayling-----	Peking cotoneaster, Siberian peashrub, barberry, common lilac, silver buffaloberry, smooth sumac, staghorn sumac	Eastern redcedar-----	Jack pine, red pine, eastern white pine	---	



Table 9.---Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	
397A: Perchlake-----	Nannyberry, redosier dogwood	American cranberrybush, common lilac, silky dogwood	Eastern arborvitae, white spruce	Eastern white pine, red maple, red pine, silver maple white ash	
399B: Grayling-----	Peking cotoneaster, Siberian peashrub, barberry, common lilac, silver buffaloberry, smooth sumac, staghorn sumac	Eastern redcedar----	Jack pine, red pine, eastern white pine	---	
399C: Grayling-----	Peking cotoneaster, Siberian peashrub, barberry, common lilac, silver buffaloberry, smooth sumac, staghorn sumac	Eastern redcedar----	Jack pine, red pine, eastern white pine	---	
399D: Grayling-----	Peking cotoneaster, Siberian peashrub, barberry, common lilac, silver buffaloberry, smooth sumac, staghorn sumac	Eastern redcedar----	Jack pine, red pine, eastern white pine	---	
405A. Lupton, Cathro, and Tawas					
406A. Loxley					
407A. Seelyeville and Markey					
410A. Seelyeville and Cathro					

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--			
	<8	8-15	16-25	26-35
412A. Rifle and Tacoosh				
415A. Greenwood				
439B: Graycalm-----	Siberian peashrub---	Amur maple, common lilac	Eastern redcedar, jack pine, red pine	Eastern white pine
Menahga-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine
439C: Graycalm-----	Siberian peashrub---	Amur maple, common lilac	Eastern redcedar, jack pine, red pine	Eastern white pine
Menahga-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine
439D: Graycalm-----	Siberian peashrub---	Amur maple, common lilac	Eastern redcedar, jack pine, red pine	Eastern white pine
Menahga-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine
441C. Freeon-Cathro				
442C: Haugen-----	Gray dogwood-----	American cranberrybush, Amur maple, common lilac	Eastern arborvitae, Black Hills spruce, Norway spruce, white spruce	Eastern white pine, red maple, red pine, white ash
Greenwood.				

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--			
	<8	8-15	16-25	26-35
443D: Amery-----	Gray dogwood-----	American cranberrybush, Amur maple, common lilac	Eastern arborvitae, Black Hills spruce, Norway spruce, white spruce	Eastern white pine red maple, red pine, white ash
Greenwood.				
461A. Bowstring				
484A. Greenwood and Beseman				
495B: Karlsborg-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce, jack pine	Eastern white pine red pine
Grettum-----	Siberian peashrub----	Amur maple, common lilac	Eastern redcedar, jack pine, red pine	Eastern white pine
Perida-----	Siberian peashrub, cotoneaster, gray dogwood, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine jack pine, red pi
495C: Karlsborg-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce, jack pine	Eastern white pine red pine
Grettum-----	Siberian peashrub----	Amur maple, common lilac	Eastern redcedar, jack pine, red pine	Eastern white pine
Perida-----	Siberian peashrub, cotoneaster, gray dogwood, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine jack pine, red pi

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--			
	<8	8-15	16-25	26-35
495D: Karlsborg-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce, jack pine	Eastern white pine, red pine
Grettum-----	Siberian peashrub---	Amur maple, common lilac	Eastern redcedar, jack pine, red pine	Eastern white pine
Perida-----	Siberian peashrub, cotoneaster, gray dogwood, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine
497A: Meenon-----	Nannyberry, redosier dogwood	American cranberrybush, common lilac, silky dogwood	Eastern arborvitae, white spruce	Eastern white pine, red maple, red pine, silver maple, white ash
515A: Manitowish-----	Manyflower cotoneaster	American cranberrybush, Amur maple, common lilac, Siberian peashrub, gray dogwood, northern white-cedar, silky dogwood	Norway spruce-----	Eastern white pine, jack pine, red pine
521A. Dody				
524E: Rock outcrop.				
Frogcreek.				
Metonga-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Norway spruce-----	Eastern white pine, jack pine, red pine

Table 9.---Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	
542B: Haugen, very stony-----	Gray dogwood-----	American cranberrybush, Amur maple, common lilac	Eastern arborvitae, Black Hills spruce, Norway spruce, white spruce	Eastern white pine, red maple, red pine, white ash	
Haugen-----	Gray dogwood-----	American cranberrybush, Amur maple, common lilac	Eastern arborvitae, Black Hills spruce, Norway spruce, white spruce	Eastern white pine, red maple, red pine, white ash	
542C: Haugen, very stony-----	Gray dogwood-----	American cranberrybush, Amur maple, common lilac	Eastern arborvitae, Black Hills spruce, Norway spruce, white spruce	Eastern white pine, red maple, red pine, white ash	
Haugen-----	Gray dogwood-----	American cranberrybush, Amur maple, common lilac	Eastern arborvitae, Black Hills spruce, Norway spruce, white spruce	Eastern white pine, red maple, red pine, white ash	
543B, 543C2. Anigon					
544F: Menahga-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine	
Mahtomedi-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine	
555A. Fordum					
574B: Sayner-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine	

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	
574C: Sayner-----	Siberian peashrub, gray dogwood, manflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine	
574E: Sayner-----	Siberian peashrub, gray dogwood, manflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine	
579B. Parkfalls					
600A. Haplosapristis and Psammaquents					
615B: Cress-----	Siberian peashrub, common lilac	Manchurian crabapple, Siberian crabapple, eastern redcedar	Russian olive, green ash, jack pine, red pine	Siberian elm, eastern white pine	
615C: Cress-----	Siberian peashrub, common lilac	Manchurian crabapple, Siberian crabapple, eastern redcedar	Russian olive, green ash, jack pine, red pine	Siberian elm, eastern white pine	
615D: Cress-----	Siberian peashrub, common lilac	Manchurian crabapple, Siberian crabapple, eastern redcedar	Russian olive, green ash, jack pine, red pine	Siberian elm, eastern white pine	
623A. Capitola					

Table 9.---Windbreaks and Environmental Plantings---Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	
624A: Ossmer-----	---	American cranberrybush, common lilac, silky dogwood, nannyberry, northern white- cedar, redosier dogwood	White spruce-----	Eastern white pine, red maple, red pine, silver maple white ash	
632A: Aftad-----	Gray dogwood-----	American cranberrybush, Amur maple, common lilac	Eastern arborvitae, Black Hills spruce, Norway spruce, white spruce	Eastern white pine, red maple, red pine, white ash	
632B: Aftad-----	---	American cranberrybush, Amur maple, common lilac, gray dogwood, northern white-cedar	Black Hills spruce, Norway spruce, white spruce	Eastern white pine, red maple, red pine, white ash	
632C: Aftad-----	Gray dogwood-----	American cranberrybush, Amur maple, common lilac	Eastern arborvitae, Black Hills spruce, Norway spruce, white spruce	Eastern white pine, red maple, red pine, white ash	
633F: Pence-----	Manyflower cotoneaster	American cranberrybush, Amur maple, common lilac, Siberian peashrub, gray dogwood, northern white-cedar, silky dogwood	Norway spruce-----	Eastern white pine, jack pine, red pine	

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	
633F: Padus-----	Manyflower cotoneaster	American cranberrybush, Amur maple, common lilac, Siberian peashrub, gray dogwood, northern white-cedar, silky dogwood	Norway spruce-----	Eastern white pine, jack pine, red pine	
648B: Sconsin-----	Manyflower cotoneaster	American cranberrybush, Amur maple, common lilac, Siberian peashrub, gray dogwood, northern white-cedar, silky dogwood	Norway spruce-----	Eastern white pine, jack pine, red pine	
670C: Keweenaw.					
Pence-----	Manyflower cotoneaster	American cranberrybush, Amur maple, common lilac, Siberian peashrub, gray dogwood, northern white-cedar, silky dogwood	Norway spruce-----	Eastern white pine, jack pine, red pine	
670E: Keweenaw.					
Pence-----	Manyflower cotoneaster	American cranberrybush, Amur maple, common lilac, Siberian peashrub, gray dogwood, northern white-cedar, silky dogwood	Norway spruce-----	Eastern white pine, jack pine, red pine	
671E: Spoonershill, stony- Spoonershill					



Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	
680B: Stanberry, stony.					
Pence, stony-----	Manyflower cotoneaster	American cranberrybush, Amur maple, common lilac, Siberian peashrub, gray dogwood, northern white-cedar, silky dogwood	Norway spruce-----	Eastern white pine, jack pine, red pine	
683A: Tipler-----	Manyflower cotoneaster	American cranberrybush, Amur maple, common lilac, Siberian peashrub, gray dogwood, northern white-cedar, silky dogwood	Norway spruce-----	Eastern white pine, jack pine, red pine	
706A. Winterfield-Totagatic					
724A. Rib-Rock outcrop					
726B: Sissabagama-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac dogwood	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine	
733A. Wozny					
771A: Lenroot-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac dogwood	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine	

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	
827A: Scoba-----	Siberian peashrub, gray dogwood, manflower cotoneaster	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine	
853C: Frogcreek-----	Gray dogwood-----	American cranberrybush, Amur maple, common lilac	Eastern arborvitae, Black Hills spruce, Norway spruce, white spruce	Eastern white pine, red maple, red pine, white ash	
Stinnett-----	Nannyberry, redosier dogwood	American cranberrybush, common lilac, silky dogwood	Eastern arborvitae, white spruce	Eastern white pine, red maple, red pine, silver maple white ash	
Wozny.					
856B: Stinnett-----	Nannyberry, redosier dogwood	American cranberrybush, common lilac, silky dogwood	Eastern arborvitae, white spruce	Eastern white pine, red maple, red pine, silver maple white ash	
857B: Frogcreek-----	Gray dogwood-----	American cranberrybush, Amur maple, common lilac	Eastern arborvitae, Black Hills spruce, Norway spruce, white spruce	Eastern white pine, red maple, red pine, white ash	
857C: Frogcreek-----	Gray dogwood-----	American cranberrybush, Amur maple, common lilac	Eastern arborvitae, Black Hills spruce, Norway spruce, white spruce	Eastern white pine, red maple, red pine, white ash	
873B, 873C, 873D. Stanberry					

Table 9.---Windbreaks and Environmental Plantings---Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	
905A: Cublake-----	Peking cotoneaster, Siberian peashrub, buffaloberry, common lilac, smooth sumac, staghorn sumac	Eastern redcedar----	Austrian pine, jack pine, red pine, eastern white pine	Manchurian crabapple	
926A: Flink-----	Sargent crabapple, silky dogwood	American cranberrybush, common lilac, nannyberry	Eastern arborvitae, white spruce	Manchurian crabapple, red pine, eastern white pine, green ash	
943D. Stanberry-Greenwood					
948A: Billyboy-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine	
970C: Keweenaw.					
Pence-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine	
Greenwood.					
970E: Keweenaw.					
Pence-----	Siberian peashrub, gray dogwood, manyflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine	
Greenwood.					

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--			
	<8	8-15	16-25	26-35
1070C: Fremstadt-----	Peking cotoneaster, Siberian peashrub	Common lilac, Amur maple, eastern arborvitae	Manchurian crabapple, white spruce, Norway spruce	Eastern white pine, jack pine, red pine
Cress-----	Siberian peashrub, common lilac	Manchurian crabapple, Siberian crabapple, eastern redcedar	Russian olive, green ash, jack pine, red pine	Siberian elm, eastern white pine
1070D: Fremstadt-----	Peking cotoneaster, Siberian peashrub	Common lilac, Amur maple, eastern arborvitae	Manchurian crabapple, white spruce, Norway spruce	Eastern white pine, jack pine, red pine
Cress-----	Siberian peashrub, common lilac	Manchurian crabapple, Siberian crabapple, eastern redcedar	Russian olive, green ash, jack pine, red pine	Siberian elm, eastern white pine
1080B: Spoonershill.				
Spoonershill, stony.				
Cress-----	Siberian peashrub, common lilac	Manchurian crabapple, Siberian crabapple, eastern redcedar	Russian olive, green ash, jack pine, red pine	Siberian elm, eastern white pine
1653C. Stanberry-Parkfalls- Wozny				
2015. Pits				
2050. Landfill				
3011A. Barronett				

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	
3125A: Meehan-----	Nannyberry, redosier dogwood	American cranberrybush, common lilac, silky dogwood	Eastern arborvitae, white spruce	Eastern white pine, red maple, red pine, silver maple white ash	
3126A: Wurtsmith-----	Siberian peashrub, manflower cotoneaster	Amur maple, common lilac	Eastern redcedar, jack pine, red pine	Eastern white pine	
3276A: Au Gres-----	Common ninebark-----	American cranberrybush, nannyberry	Amur maple, white spruce	Manchurian crabapple, Norway spruce, jack pine, eastern white pine green ash	
3312B: Glendenning, very stony	Redosier dogwood, silky dogwood	American cranberrybush, common lilac	Eastern arborvitae, white spruce	Norway spruce, eastern white pine green ash, red pine, silver maple white ash	
Glendenning-----	Redosier dogwood, silky dogwood	American cranberrybush, common lilac	Eastern arborvitae, white spruce	Norway spruce, eastern white pine green ash, red pine, silver maple white ash	
3336A. Fenander					
3403A. Loxley, Beseman, and Dawson					
3424C: Frogcreek-----	Gray dogwood-----	American cranberrybush, Amur maple, common lilac	Eastern arborvitae, Black Hills spruce, Norway spruce, white spruce	Eastern white pine, red maple, red pine, white ash	

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--			
	<8	8-15	16-25	26-35
3424C: Magroc-----	Nannyberry, redosier dogwood, silky dogwood	American cranberrybush, common lilac	Eastern arborvitae, white spruce	Eastern white pine, red maple, red pine, silver maple white ash
Stinnett-----	Nannyberry, redosier dogwood	American cranberrybush, common lilac, silky dogwood	Eastern arborvitae, white spruce	Eastern white pine, red maple, red pine, silver maple white ash
Rock outcrop.				
3446A. Newson				
3448B: Grettum-----	Peking cotoneaster, Siberian peashrub, buffaloberry, common lilac, silver buffaloberry, smooth sumac, staghorn sumac	Eastern redcedar----	Jack pine, red pine, eastern white pine	---
3448C: Grettum-----	Peking cotoneaster, Siberian peashrub, buffaloberry, common lilac, silver buffaloberry, smooth sumac, staghorn sumac	Eastern redcedar----	Jack pine, red pine, eastern white pine	---
3516A: Slimlake-----	Siberian peashrub, gray dogwood, manflower cotoneaster, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine
3629B: Perida-----	Siberian peashrub, cotoneaster, gray dogwood, silky dogwood	American cranberrybush, Amur maple, common lilac	Eastern redcedar, Norway spruce	Eastern white pine, jack pine, red pine

Table 9.--Windbreaks and Environmental Plantings--Continued

Map symbol and soil name	Trees having predicted 20-year average height, in feet, of--				
	<8	8-15	16-25	26-35	
M-W. Miscellaneous water					
W. Water					

Table 10.--Conservation Tree/Shrub Suitability Groups

(Absence of an entry indicates that a conservation tree/shrub suitability group is not assigned)

Map symbol and soil name	Conservation tree/shrub suitability group
3A:	
Totagatic-----	10
Bowstring-----	10
Ausable-----	10
22A:	
Comstock-----	10
24A:	
Poskin-----	10
27A:	
Scott Lake-----	6GA
28B:	
Haugen, very stony----	2A
Haugen-----	2A
Rosholt, very stony---	6GA
Rosholt-----	6GA
28C:	
Haugen, very stony----	2A
Haugen-----	2A
Rosholt, very stony---	6GA
Rosholt-----	6GA
33B:	
Chetek-----	6GA
33C:	
Chetek-----	6GA
38A:	
Rosholt-----	6GA
38B:	
Rosholt-----	6GA
38C:	
Rosholt-----	6GA
38D:	
Rosholt-----	6GA
42D:	
Amery-----	4A
43B:	
Antigo-----	6GA
43C:	
Antigo-----	6GA



Table 10.--Conservation Tree/Shrub Suitability Groups--Continued

Map symbol and soil name	Conservation tree/shrub suitability group
43D: Antigo-----	6GA
48A: Brill-----	2A
63A: Crystal Lake-----	2A
63B: Crystal Lake-----	2A
63C: Crystal Lake-----	2A
63E: Crystal Lake-----	2A
64A: Totagatic-----	10
Winterfield-----	10
69B: Keweenaw-----	4A
Sayner-----	7A
Vilas-----	7A
69C: Keweenaw-----	4A
Sayner-----	7A
Vilas-----	7A
69E: Keweenaw-----	4A
Sayner-----	7A
Vilas-----	7A
74B: Vilas-----	7A
74C: Vilas-----	7A
74D: Vilas-----	7A
100B: Menahga-----	7A
100C: Menahga-----	7A
100D: Menahga-----	7A

Table 10.--Conservation Tree/Shrub Suitability Groups--Continued

Map symbol and soil name	Conservation tree/shrub suitability group
127D:	
Amery-----	4A
Rosholt-----	6GA
127E:	
Amery-----	4A
Rosholt-----	6GA
156B:	
Magnor, very stony----	10
Magnor-----	10
157B:	
Freeon, very stony----	2A
Freeon-----	2A
157C:	
Freeon, very stony----	2A
Freeon-----	2A
160A:	
Oesterle-----	10
182B:	
Padus-----	6GA
182C:	
Padus-----	6GA
192A:	
Worcester-----	10
193A:	
Minocqua-----	10
215B:	
Pence-----	6GA
215C:	
Pence-----	6GA
215D:	
Pence-----	6GA
315A:	
Rib-----	10
337A:	
Plover-----	10
368B:	
Mahtomedi-----	7A
Cress-----	6GA
368C:	
Mahtomedi-----	7A
Cress-----	6GA

Table 10.--Conservation Tree/Shrub Suitability Groups--Continued

Map symbol and soil name	Conservation tree/shrub suitability group
368D: Mahtomedi-----	7A
Cress-----	6GA
371A: Croswell-----	10
380B: Cress-----	6GA
Rosholt-----	6GA
380C: Cress-----	6GA
Rosholt-----	6GA
380D: Cress-----	6GA
Rosholt-----	6GA
383B: Mahtomedi-----	7A
383C: Mahtomedi-----	7A
383D: Mahtomedi-----	7A
396B: Friendship-----	1A
Wurtsmith-----	2A
Grayling-----	7A
397A: Perchlake-----	10
399B: Grayling-----	7A
399C: Grayling-----	7A
399D: Grayling-----	7A
405A: Lupton-----	10
Cathro-----	10
Tawas-----	10
406A: Loxley-----	10

Table 10.--Conservation Tree/Shrub Suitability Groups--Continued

Map symbol and soil name	Conservation tree/shrub suitability group
407A: Seelyeville-----	10
Markey-----	10
410A: Seelyeville-----	10
Cathro-----	10
412A: Rifle-----	10
Tacoosh-----	10
415A: Greenwood-----	10
439B: Graycalm-----	7A
Menahga-----	7A
439C: Graycalm-----	7A
Menahga-----	7A
439D: Graycalm-----	7A
Menahga-----	7A
441C: Freeon-----	2A
Cathro-----	10
442C: Haugen-----	2A
Greenwood-----	10
443D: Amery-----	4A
Greenwood-----	10
461A: Bowstring-----	10
484A: Greenwood-----	10
Beseman-----	10
495B: Karlsborg-----	2A
Grettum-----	1A
Perida-----	1A

Table 10.--Conservation Tree/Shrub Suitability Groups--Continued

Map symbol and soil name	Conservation tree/shrub suitability group
495C:	
Karlsborg-----	2A
Grettum-----	1A
Perida-----	1A
495D:	
Karlsborg-----	2A
Grettum-----	1A
Perida-----	1A
497A:	
Meenon-----	10
515A:	
Manitowish-----	2A
521A:	
Dody-----	10
524E:	
Rock outcrop.	
Frogcreek-----	2A
Metonga-----	4A
542B:	
Haugen, very stony----	2A
Haugen-----	2A
542C:	
Haugen, very stony----	2A
Haugen-----	2A
543B:	
Anigon-----	6GA
543C2:	
Anigon-----	6GA
544F:	
Menahga-----	7A
Mahtomedi-----	7A
555A:	
Fordum-----	10
574B:	
Sayner-----	7A
574C:	
Sayner-----	7A
574E:	
Sayner-----	7A

Table 10.--Conservation Tree/Shrub Suitability Groups--Continued

Map symbol and soil name	Conservation tree/shrub suitability group
579B: Parkfalls-----	10
600A: Haplosaprists-----	10
Psammaquents-----	10
615B: Cress-----	6GA
615C: Cress-----	6GA
615D: Cress-----	6GA
623A: Capitola-----	10
624A: Ossmer-----	10
632A: Aftad-----	2A
632B: Aftad-----	2A
632C: Aftad-----	2A
633F: Pence-----	6GA
Padus-----	6GA
648B: Sconsin-----	2A
670C: Keweenaw-----	4A
Pence-----	6GA
670E: Keweenaw-----	4A
Pence-----	6GA
671B: Spoonershill, stony----	2A
Spoonershill-----	2A
680B: Stanberry, stony-----	2A
Pence, stony-----	6GA
683A: Tipler-----	2A

Table 10.--Conservation Tree/Shrub Suitability Groups--Continued

Map symbol and soil name	Conservation tree/shrub suitability group
706A: Winterfield-----	10
Totagatic-----	10
724A: Rib-----	10
Rock outcrop.	
726B: Sissabagama-----	2A
733A: Wozny-----	10
771A: Lenroot-----	2A
827A: Scoba-----	2A
853C: Frogcreek-----	2A
Stinnett-----	10
Wozny-----	10
856B: Stinnett-----	10
857B: Frogcreek-----	2A
857C: Frogcreek-----	2A
873B: Stanberry-----	2A
873C: Stanberry-----	2A
873D: Stanberry-----	2A
905A: Cublake-----	2A
926A: Flink-----	10
943D: Stanberry-----	2A
Greenwood-----	10
948A: Billyboy-----	2A

Table 10.--Conservation Tree/Shrub Suitability Groups--Continued

Map symbol and soil name	Conservation tree/shrub suitability group
970C:	
Keweenaw-----	4A
Pence-----	6GA
Greenwood-----	10
970E:	
Keweenaw-----	4A
Pence-----	6GA
Greenwood-----	10
1070C:	
Fremstadt-----	4A
Cress-----	6GA
1070D:	
Fremstadt-----	4A
Cress-----	6GA
1080B:	
Spoonerhill-----	2A
Spoonerhill, stony---	2A
Cress-----	6GA
1653C:	
Stanberry-----	2A
Parkfalls-----	10
Wozny-----	10
2015.	
Pits	
2050.	
Landfill	
3011A:	
Barronett-----	10
3125A:	
Meehan-----	10
3126A:	
Wurtsmith-----	2A
3276A:	
Au Gres-----	10
3312B:	
Glendenning, very stony-----	10
Glendenning-----	10



Table 10.--Conservation Tree/Shrub Suitability Groups--Continued

Map symbol and soil name	Conservation tree/shrub suitability group
3336A: Fenander-----	10
3403A: Loxley-----	10
Beseman-----	10
Dawson-----	10
3424C: Frogcreek-----	2A
Magroc-----	10
Stinnett-----	10
Rock outcrop.	
3446A: Newson-----	10
3448B: Grettum-----	1A
3448C: Grettum-----	1A
3516A: Slimlake-----	6GA
3629B: Perida-----	2A
M-W. Miscellaneous water	
W. Water	

Table 11.--Forest Land Harvest Equipment Considerations

(See text for a description of the considerations listed in this table)

Map symbol and soil name	Forest land harvest equipment considerations
3A:	
Totagatic-----	Flooding Wetness Susceptible to rutting and wheel slippage Poor traction (loose sandy material)
Bowstring-----	Flooding Wetness Susceptible to rutting and wheel slippage
Ausable-----	Flooding Wetness Susceptible to rutting and wheel slippage Poor traction (loose sandy material)
22A:	
Comstock-----	Wetness Susceptible to rutting and wheel slippage
24A:	
Poskin-----	Wetness Susceptible to rutting and wheel slippage
27A:	
Scott Lake-----	No major considerations
28B:	
Haugen, very stony-----	Wetness
Haugen-----	Wetness
Rosholt, very stony-----	No major considerations
Rosholt-----	No major considerations
28C:	
Haugen, very stony-----	Wetness
Haugen-----	Wetness
Rosholt, very stony-----	No major considerations
Rosholt-----	No major considerations
33B:	
Chetek-----	Susceptible to rutting and wheel slippage
33C:	
Chetek-----	Susceptible to rutting and wheel slippage
38A:	
Rosholt-----	No major considerations
38B:	
Rosholt-----	No major considerations
38C:	
Rosholt-----	No major considerations
38D:	
Rosholt-----	Slope

Table 11.--Forest Land Harvest Equipment Considerations--Continued

Map symbol and soil name	Forest land harvest equipment considerations
42D: Amery-----	Slope
43B: Antigo-----	No major considerations
43C: Antigo-----	No major considerations
43D: Antigo-----	Slope
48A: Brill-----	Wetness Susceptible to rutting and wheel slippage
63A: Crystal Lake-----	Wetness Susceptible to rutting and wheel slippage
63B: Crystal Lake-----	Wetness Susceptible to rutting and wheel slippage
63C: Crystal Lake-----	Wetness Susceptible to rutting and wheel slippage
63E: Crystal Lake-----	Slope Wetness Susceptible to rutting and wheel slippage
64A: Totagatic-----	Flooding Wetness Susceptible to rutting and wheel slippage Poor traction (loose sandy material)
Winterfield-----	Flooding Wetness Poor traction (loose sandy material)
69B: Keweenaw-----	Poor traction (loose sandy material)
Sayner-----	Poor traction (loose sandy material)
Vilas-----	Poor traction (loose sandy material)
69C: Keweenaw-----	Poor traction (loose sandy material)
Sayner-----	Poor traction (loose sandy material)
Vilas-----	Poor traction (loose sandy material)
69E: Keweenaw-----	Slope Poor traction (loose sandy material)
Sayner-----	Slope Poor traction (loose sandy material)

Table 11.--Forest Land Harvest Equipment Considerations--Continued

Map symbol and soil name	Forest land harvest equipment considerations
69E: Vilas-----	Slope Poor traction (loose sandy material)
74B: Vilas-----	Poor traction (loose sandy material)
74C: Vilas-----	Poor traction (loose sandy material)
74D: Vilas-----	Slope Poor traction (loose sandy material)
100B: Menahga-----	Poor traction (loose sandy material)
100C: Menahga-----	Poor traction (loose sandy material)
100D: Menahga-----	Slope Poor traction (loose sandy material)
127D: Amery-----	Slope
Rosholt-----	Slope
127E: Amery-----	Slope
Rosholt-----	Slope
156B: Magnor, very stony-----	Wetness
Magnor-----	Wetness
157B: Freeon, very stony-----	Wetness
Freeon-----	Wetness
157C: Freeon, very stony-----	Wetness
Freeon-----	Wetness
160A: Oesterle-----	Wetness
182B: Padus-----	No major considerations
182C: Padus-----	No major considerations
192A: Worcester-----	Wetness
193A: Minocqua-----	Wetness Susceptible to rutting and wheel slippage

Table 11.--Forest Land Harvest Equipment Considerations--Continued

Map symbol and soil name	Forest land harvest equipment considerations
215B: Pence-----	No major considerations
215C: Pence-----	No major considerations
215D: Pence-----	Slope
315A: Rib-----	Wetness Susceptible to rutting and wheel slippage
337A: Plover-----	Wetness
368B: Mahtomedi-----	Poor traction (loose sandy material)
Cress-----	No major considerations
368C: Mahtomedi-----	Poor traction (loose sandy material)
Cress-----	No major considerations
368D: Mahtomedi-----	Slope Poor traction (loose sandy material)
Cress-----	Slope
371A: Crowell-----	Poor traction (loose sandy material)
380B: Cress-----	No major considerations
Rosholt-----	No major considerations
380C: Cress-----	No major considerations
Rosholt-----	No major considerations
380D: Cress-----	Slope
Rosholt-----	Slope
383B: Mahtomedi-----	Poor traction (loose sandy material)
383C: Mahtomedi-----	Poor traction (loose sandy material)
383D: Mahtomedi-----	Slope Poor traction (loose sandy material)
396B: Friendship-----	Poor traction (loose sandy material)
Wurtsmith-----	Poor traction (loose sandy material)

Table 11.--Forest Land Harvest Equipment Considerations--Continued

Map symbol and soil name	Forest land harvest equipment considerations
396B: Grayling-----	Poor traction (loose sandy material)
397A: Perchlake-----	Wetness Poor traction (loose sandy material)
399B: Grayling-----	Poor traction (loose sandy material)
399C: Grayling-----	Poor traction (loose sandy material)
399D: Grayling-----	Slope Poor traction (loose sandy material)
405A: Lupton-----	Wetness Susceptible to rutting and wheel slippage
Cathro-----	Wetness Susceptible to rutting and wheel slippage
Tawas-----	Wetness Susceptible to rutting and wheel slippage
406A: Loxley-----	Wetness Susceptible to rutting and wheel slippage
407A: Seelyeville-----	Wetness Susceptible to rutting and wheel slippage
Markey-----	Wetness Susceptible to rutting and wheel slippage
410A: Seelyeville-----	Wetness Susceptible to rutting and wheel slippage
Cathro-----	Wetness Susceptible to rutting and wheel slippage
412A: Rifle-----	Wetness Susceptible to rutting and wheel slippage
Tacoosh-----	Wetness Susceptible to rutting and wheel slippage
415A: Greenwood-----	Wetness Susceptible to rutting and wheel slippage
439B: Graycalm-----	Poor traction (loose sandy material)
Menahga-----	Poor traction (loose sandy material)
439C: Graycalm-----	Poor traction (loose sandy material)
Menahga-----	Poor traction (loose sandy material)

Table 11.--Forest Land Harvest Equipment Considerations--Continued

Map symbol and soil name	Forest land harvest equipment considerations
439D: Graycalm-----	Slope Poor traction (loose sandy material)
Menahga-----	Slope Poor traction (loose sandy material)
441C: Freeon-----	Wetness
Cathro-----	Wetness Susceptible to rutting and wheel slippage
442C: Haugen-----	Wetness
Greenwood-----	Wetness Susceptible to rutting and wheel slippage
443D: Amery-----	Slope
Greenwood-----	Wetness Susceptible to rutting and wheel slippage
461A: Bowstring-----	Flooding Wetness Susceptible to rutting and wheel slippage
484A: Greenwood-----	Wetness Susceptible to rutting and wheel slippage
Beseman-----	Wetness Susceptible to rutting and wheel slippage
495B: Karlsborg-----	Wetness Poor traction (loose sandy material)
Grettum-----	Poor traction (loose sandy material)
Perida-----	Wetness Poor traction (loose sandy material)
495C: Karlsborg-----	Wetness Poor traction (loose sandy material)
Grettum-----	Poor traction (loose sandy material)
Perida-----	Wetness Poor traction (loose sandy material)
495D: Karlsborg-----	Slope Wetness Poor traction (loose sandy material)
Grettum-----	Slope Poor traction (loose sandy material)

Table 11.--Forest Land Harvest Equipment Considerations--Continued

Map symbol and soil name	Forest land harvest equipment considerations
495D: Perida-----	Slope Wetness Poor traction (loose sandy material)
497A: Meenon-----	Wetness Poor traction (loose sandy material)
515A: Manitowish-----	No major considerations
521A: Dody-----	Wetness Susceptible to rutting and wheel slippage Poor traction (loose sandy material)
524E: Rock outcrop.	
Frogcreek-----	Wetness Areas of rock outcrop
Metonga-----	Slope Areas of rock outcrop
542B: Haugen, very stony-----	Wetness
Haugen-----	Wetness
542C: Haugen, very stony-----	Wetness
Haugen-----	Wetness
543B: Anigon-----	Susceptible to rutting and wheel slippage
543C2: Anigon-----	Susceptible to rutting and wheel slippage
544F: Menahga-----	Slope Poor traction (loose sandy material)
Mahtomedi-----	Slope Poor traction (loose sandy material)
555A: Fordum-----	Flooding Wetness Susceptible to rutting and wheel slippage
574B: Sayner-----	Poor traction (loose sandy material)
574C: Sayner-----	Poor traction (loose sandy material)
574E: Sayner-----	Slope Poor traction (loose sandy material)



Table 11.--Forest Land Harvest Equipment Considerations--Continued

Map symbol and soil name	Forest land harvest equipment considerations
579B: Parkfalls-----	Wetness
600A: Haplosaprists-----	Onsite investigation required
Psammaquents-----	Onsite investigation required
615B: Cress-----	No major considerations
615C: Cress-----	No major considerations
615D: Cress-----	Slope
623A: Capitola-----	Wetness Susceptible to rutting and wheel slippage
624A: Ossmer-----	Wetness
632A: Aftad-----	Wetness
632B: Aftad-----	Wetness
632C: Aftad-----	Wetness
633F: Pence-----	Slope
Padus-----	Slope
648B: Sconsin-----	Wetness
670C: Keweenaw-----	No major considerations
Pence-----	No major considerations
670E: Keweenaw-----	Slope
Pence-----	Slope
671B: Spoonershill, stony-----	Wetness
Spoonershill-----	Wetness
680B: Stanberry, stony-----	Wetness
Pence, stony-----	No major considerations
683A: Tipler-----	No major considerations

Table 11.--Forest Land Harvest Equipment Considerations--Continued

Map symbol and soil name	Forest land harvest equipment considerations
706A: Winterfield-----	Flooding Wetness Poor traction (loose sandy material)
Totagatic-----	Flooding Wetness Poor traction (loose sandy material)
724A: Rib-----	Wetness Areas of rock outcrop Susceptible to rutting and wheel slippage
Rock outcrop.	
726B: Sissabagama-----	Wetness Poor traction (loose sandy material)
733A: Wozny-----	Wetness Susceptible to rutting and wheel slippage
771A: Lenroot-----	Poor traction (loose sandy material)
827A: Scoba-----	No major considerations
853C: Frogcreek-----	Wetness
Stinnett-----	Wetness
Wozny-----	Wetness Susceptible to rutting and wheel slippage
856B: Stinnett-----	Wetness
857B: Frogcreek-----	Wetness
857C: Frogcreek-----	Wetness
873B: Stanberry-----	Wetness
873C: Stanberry-----	Wetness
873D: Stanberry-----	Slope Wetness
905A: Cublake-----	Wetness Poor traction (loose sandy material)
926A: Flink-----	Wetness Poor traction (loose sandy material)

Table 11.--Forest Land Harvest Equipment Considerations--Continued

Map symbol and soil name	Forest land harvest equipment considerations
943D:	
Stanberry-----	Slope Wetness
Greenwood-----	Wetness Susceptible to rutting and wheel slippage
948A:	
Billyboy-----	No major considerations
970C:	
Keweenaw-----	No major considerations
Pence-----	No major considerations
Greenwood-----	Wetness Susceptible to rutting and wheel slippage
970E:	
Keweenaw-----	Slope
Pence-----	Slope
Greenwood-----	Wetness Susceptible to rutting and wheel slippage
1070C:	
Fremstadt-----	Poor traction (loose sandy material)
Cress-----	No major considerations
1070D:	
Fremstadt-----	Slope Poor traction (loose sandy material)
Cress-----	Slope
1080B:	
Spoonerhill-----	Wetness
Spoonerhill, stony-----	Wetness
Cress-----	No major considerations
1653C:	
Stanberry-----	Wetness
Parkfalls-----	Wetness
Wozny-----	Wetness Susceptible to rutting and wheel slippage
2015.	
Pits	
2050.	
Landfill	
3011A:	
Barronett-----	Wetness Susceptible to rutting and wheel slippage
3125A:	
Meehan-----	Wetness Poor traction (loose sandy material)

Table 11.--Forest Land Harvest Equipment Considerations--Continued

Map symbol and soil name	Forest land harvest equipment considerations
3126A: Wurtsmith-----	Poor traction (loose sandy material)
3276A: Au Gres-----	Wetness Poor traction (loose sandy material)
3312B: Glendenning, very stony-----	Wetness
Glendenning-----	Wetness
3336A: Fenander-----	Wetness
3403A: Loxley-----	Wetness Susceptible to rutting and wheel slippage
Beseman-----	Wetness Susceptible to rutting and wheel slippage
Dawson-----	Wetness Susceptible to rutting and wheel slippage
3424C: Frogcreek-----	Wetness
Magroc-----	Wetness
Stinnett-----	Wetness
Rock outcrop.	
3446A: Newson-----	Wetness Susceptible to rutting and wheel slippage Poor traction (loose sandy material)
3448B: Grettum-----	Poor traction (loose sandy material)
3448C: Grettum-----	Poor traction (loose sandy material)
3516A: Slimlake-----	No major considerations
3629B: Perida-----	Wetness Poor traction (loose sandy material)
M-W. Miscellaneous water	
W. Water	

Table 12.--Forest Haul Road Considerations

(See text for a description of the considerations listed in this table)

Map symbol and soil name	Forest haul road considerations
3A:	
Totagatic-----	Flooding Wetness Low bearing strength
Bowstring-----	Flooding Wetness Low bearing strength
Ausable-----	Flooding Wetness Low bearing strength
22A:	
Comstock-----	Wetness Low bearing strength
24A:	
Poskin-----	Wetness Low bearing strength
27A:	
Scott Lake-----	No major considerations
28B:	
Haugen, very stony-----	Wetness
Haugen-----	Wetness
Rosholt, very stony-----	No major considerations
Rosholt-----	No major considerations
28C:	
Haugen, very stony-----	Slope Wetness
Haugen-----	Slope Wetness
Rosholt, very stony-----	Slope
Rosholt-----	Slope
33B:	
Chetek-----	No major considerations
33C:	
Chetek-----	Slope
38A:	
Rosholt-----	No major considerations
38B:	
Rosholt-----	No major considerations
38C:	
Rosholt-----	Slope
38D:	
Rosholt-----	Slope

Table 12.--Forest Haul Road Considerations--Continued

Map symbol and soil name	Forest haul road considerations
42D: Amery-----	Slope
43B: Antigo-----	No major considerations
43C: Antigo-----	Slope
43D: Antigo-----	Slope
48A: Brill-----	Wetness Low bearing strength
63A: Crystal Lake-----	Wetness Low bearing strength
63B: Crystal Lake-----	Wetness Low bearing strength
63C: Crystal Lake-----	Slope Wetness Low bearing strength
63E: Crystal Lake-----	Slope Wetness Low bearing strength
64A: Totagatic-----	Flooding Wetness Low bearing strength
Winterfield-----	Flooding Wetness
69B: Keweenaw-----	No major considerations
Sayner-----	No major considerations
Vilas-----	No major considerations
69C: Keweenaw-----	Slope
Sayner-----	Slope
Vilas-----	Slope
69E: Keweenaw-----	Slope
Sayner-----	Slope
Vilas-----	Slope

Table 12.--Forest Haul Road Considerations--Continued

Map symbol and soil name	Forest haul road considerations
74B: Vilas-----	No major considerations
74C: Vilas-----	Slope
74D: Vilas-----	Slope
100B: Menahga-----	No major considerations
100C: Menahga-----	Slope
100D: Menahga-----	Slope
127D: Amery-----	Slope
Rosholt-----	Slope
127E: Amery-----	Slope
Rosholt-----	Slope
156B: Magnor, very stony-----	Wetness
Magnor-----	Wetness
157B: Freeon, very stony-----	Wetness
Freeon-----	Wetness
157C: Freeon, very stony-----	Slope Wetness
Freeon-----	Slope Wetness
160A: Oesterle-----	Wetness
182B: Padus-----	No major considerations
182C: Padus-----	Slope
192A: Worcester-----	Wetness
193A: Minocqua-----	Wetness Low bearing strength
215B: Pence-----	No major considerations

Table 12.--Forest Haul Road Considerations--Continued

Map symbol and soil name	Forest haul road considerations
215C: Pence-----	Slope
215D: Pence-----	Slope
315A: Rib-----	Wetness Low bearing strength
337A: Plover-----	Wetness
368B: Mahtomedi-----	No major considerations
Cress-----	No major considerations
368C: Mahtomedi-----	Slope
Cress-----	Slope
368D: Mahtomedi-----	Slope
Cress-----	Slope
371A: Crowell-----	No major considerations
380B: Cress-----	No major considerations
Rosholt-----	No major considerations
380C: Cress-----	Slope
Rosholt-----	Slope
380D: Cress-----	Slope
Rosholt-----	Slope
383B: Mahtomedi-----	No major considerations
383C: Mahtomedi-----	Slope
383D: Mahtomedi-----	Slope
396B: Friendship-----	No major considerations
Wurtsmith-----	No major considerations
Grayling-----	No major considerations
397A: Perchlake-----	Wetness



Table 12.--Forest Haul Road Considerations--Continued

Map symbol and soil name	Forest haul road considerations
399B: Grayling-----	No major considerations
399C: Grayling-----	Slope
399D: Grayling-----	Slope
405A: Lupton-----	Wetness Low bearing strength
Cathro-----	Wetness Low bearing strength
Tawas-----	Wetness Low bearing strength
406A: Loxley-----	Wetness Low bearing strength
407A: Seelyeville-----	Wetness Low bearing strength
Markey-----	Wetness Low bearing strength
410A: Seelyeville-----	Wetness Low bearing strength
Cathro-----	Wetness Low bearing strength
412A: Rifle-----	Wetness Low bearing strength
Tacoosh-----	Wetness Low bearing strength
415A: Greenwood-----	Wetness Low bearing strength
439B: Graycalm-----	No major considerations
Menahga-----	No major considerations
439C: Graycalm-----	Slope
Menahga-----	Slope
439D: Graycalm-----	Slope
Menahga-----	Slope

Table 12.--Forest Haul Road Considerations--Continued

Map symbol and soil name	Forest haul road considerations
441C:	
Freeon-----	Slope Wetness
Cathro-----	Wetness Low bearing strength
442C:	
Haugen-----	Slope Wetness
Greenwood-----	Wetness Low bearing strength
443D:	
Amery-----	Slope
Greenwood-----	Wetness Low bearing strength
461A:	
Bowstring-----	Flooding Wetness Low bearing strength
484A:	
Greenwood-----	Wetness Low bearing strength
Beseman-----	Wetness Low bearing strength
495B:	
Karlsborg-----	Wetness
Grettum-----	No major considerations
Perida-----	Wetness
495C:	
Karlsborg-----	Slope Wetness
Grettum-----	Slope
Perida-----	Slope Wetness
495D:	
Karlsborg-----	Slope Wetness
Grettum-----	Slope
Perida-----	Slope Wetness
497A:	
Meenon-----	Wetness
515A:	
Manitowish-----	No major considerations

Table 12.--Forest Haul Road Considerations--Continued

Map symbol and soil name	Forest haul road considerations
521A: Dody-----	Wetness Low bearing strength
524E: Rock outcrop.  Frogcreek-----	   Slope Wetness Areas of rock outcrop
Metonga-----	Slope Areas of rock outcrop
542B: Haugen, very stony-----	Wetness
Haugen-----	Wetness
542C: Haugen, very stony-----	Slope Wetness
Haugen-----	Slope Wetness
543B: Anigon-----	Low bearing strength
543C2: Anigon-----	Slope Low bearing strength
544F: Menahga-----	Slope
Mahtomedi-----	Slope
555A: Fordum-----	Flooding Wetness Low bearing strength
574B: Sayner-----	No major considerations
574C: Sayner-----	Slope
574E: Sayner-----	Slope
579B: Parkfalls-----	Wetness
600A: Haplosaprists-----	Onsite investigation required
Psammaquents-----	Onsite investigation required
615B: Cress-----	No major considerations

Table 12.--Forest Haul Road Considerations--Continued

Map symbol and soil name	Forest haul road considerations
615C: Cress-----	Slope
615D: Cress-----	Slope
623A: Capitola-----	Wetness Low bearing strength
624A: Ossmer-----	Wetness
632A: Aftad-----	Wetness
632B: Aftad-----	Wetness
632C: Aftad-----	Slope Wetness
633F: Pence-----	Slope
Padus-----	Slope
648B: Sconsin-----	Wetness
670C: Keweenaw-----	Slope
Pence-----	Slope
670E: Keweenaw-----	Slope
Pence-----	Slope
671B: Spoonershill, stony-----	Wetness
Spoonershill-----	Wetness
680B: Stanberry, stony-----	Wetness
Pence, stony-----	No major considerations
683A: Tipler-----	No major considerations
706A: Winterfield-----	Flooding Wetness
Totagatic-----	Flooding Wetness

Table 12.--Forest Haul Road Considerations--Continued

Map symbol and soil name	Forest haul road considerations
724A: Rib-----	Wetness Areas of rock outcrop Low bearing strength
Rock outcrop.	
726B: Sissabagama-----	Wetness
733A: Wozny-----	Wetness Low bearing strength
771A: Lenroot-----	No major considerations
827A: Scoba-----	No major considerations
853C: Frogcreek-----	Slope Wetness
Stinnett-----	Wetness
Wozny-----	Wetness Low bearing strength
856B: Stinnett-----	Wetness
857B: Frogcreek-----	Wetness
857C: Frogcreek-----	Slope Wetness
873B: Stanberry-----	Wetness
873C: Stanberry-----	Slope Wetness
873D: Stanberry-----	Slope Wetness
905A: Cublake-----	Wetness
926A: Flink-----	Wetness
943D: Stanberry-----	Slope Wetness
Greenwood-----	Wetness Low bearing strength

Table 12.--Forest Haul Road Considerations--Continued

Map symbol and soil name	Forest haul road considerations
948A: Billyboy-----	No major considerations
970C: Keweenaw-----	Slope
Pence-----	Slope
Greenwood-----	Wetness Low bearing strength
970E: Keweenaw-----	Slope
Pence-----	Slope
Greenwood-----	Wetness Low bearing strength
1070C: Fremstadt-----	Slope
Cress-----	Slope
1070D: Fremstadt-----	Slope
Cress-----	Slope
1080B: Spoonerhill-----	Wetness
Spoonerhill, stony-----	Wetness
Cress-----	No major considerations
1653C: Stanberry-----	Slope Wetness
Parkfalls-----	Wetness
Wozny-----	Wetness Low bearing strength
2015. Pits	
2050. Landfill	
3011A: Barronett-----	Wetness Low bearing strength
3125A: Meehan-----	Wetness
3126A: Wurtsmith-----	No major considerations
3276A: Au Gres-----	Wetness

Table 12.--Forest Haul Road Considerations--Continued

Map symbol and soil name	Forest haul road considerations
3312B: Glendenning, very stony-----	Wetness
Glendenning-----	Wetness
3336A: Fenander-----	Wetness
3403A: Loxley-----	Wetness Low bearing strength
Beseman-----	Wetness Low bearing strength
Dawson-----	Wetness Low bearing strength
3424C: Frogcreek-----	Slope Wetness
Magroc-----	Wetness
Stinnett-----	Wetness
Rock outcrop.	
3446A: Newson-----	Wetness Low bearing strength
3448B: Grettum-----	No major considerations
3448C: Grettum-----	Slope
3516A: Slimlake-----	No major considerations
3629B: Perida-----	Wetness
M-W. Miscellaneous water	
W. Water	

Table 13.--Forest Log Landing Considerations

(See text for a description of the considerations listed in this table)

Map symbol and soil name	Forest log landing considerations
3A:	
Totagatic-----	Flooding Wetness Susceptible to rutting and wheel slippage
Bowstring-----	Flooding Wetness Susceptible to rutting and wheel slippage
Ausable-----	Flooding Wetness Susceptible to rutting and wheel slippage
22A:	
Comstock-----	Wetness Susceptible to rutting and wheel slippage
24A:	
Poskin-----	Wetness Susceptible to rutting and wheel slippage
27A:	
Scott Lake-----	No major considerations
28B:	
Haugen, very stony-----	Wetness
Haugen-----	Wetness
Rosholt, very stony-----	No major considerations
Rosholt-----	No major considerations
28C:	
Haugen, very stony-----	Slope Wetness
Haugen-----	Slope Wetness
Rosholt, very stony-----	Slope
Rosholt-----	Slope
33B:	
Chetek-----	No major considerations
33C:	
Chetek-----	Slope
38A:	
Rosholt-----	No major considerations
38B:	
Rosholt-----	No major considerations
38C:	
Rosholt-----	Slope



Table 13.--Forest Log Landing Considerations--Continued

Map symbol and soil name	Forest log landing considerations
38D: Rosholt-----	Slope
42D: Amery-----	Slope
43B: Antigo-----	No major considerations
43C: Antigo-----	Slope
43D: Antigo-----	Slope
48A: Brill-----	Wetness Susceptible to rutting and wheel slippage
63A: Crystal Lake-----	Wetness Susceptible to rutting and wheel slippage
63B: Crystal Lake-----	Wetness Susceptible to rutting and wheel slippage
63C: Crystal Lake-----	Slope Wetness Susceptible to rutting and wheel slippage
63E: Crystal Lake-----	Slope Wetness Susceptible to rutting and wheel slippage
64A: Totagatic-----	Flooding Wetness Susceptible to rutting and wheel slippage
Winterfield-----	Flooding Wetness
69B: Keweenaw-----	No major considerations
Sayner-----	No major considerations
Vilas-----	No major considerations
69C: Keweenaw-----	Slope
Sayner-----	Slope
Vilas-----	Slope
69E: Keweenaw-----	Slope
Sayner-----	Slope
Vilas-----	Slope

Table 13.--Forest Log Landing Considerations--Continued

Map symbol and soil name	Forest log landing considerations
74B: Vilas-----	No major considerations
74C: Vilas-----	Slope
74D: Vilas-----	Slope
100B: Menahga-----	No major considerations
100C: Menahga-----	Slope
100D: Menahga-----	Slope
127D: Amery-----	Slope
Rosholt-----	Slope
127E: Amery-----	Slope
Rosholt-----	Slope
156B: Magnor, very stony-----	Wetness
Magnor-----	Wetness
157B: Freeon, very stony-----	Wetness
Freeon-----	Wetness
157C: Freeon, very stony-----	Slope Wetness
Freeon-----	Slope Wetness
160A: Oesterle-----	Wetness
182B: Padus-----	No major considerations
182C: Padus-----	Slope
192A: Worcester-----	Wetness
193A: Minocqua-----	Wetness Susceptible to rutting and wheel slippage
215B: Pence-----	No major considerations

Table 13.--Forest Log Landing Considerations--Continued

Map symbol and soil name	Forest log landing considerations
215C: Pence-----	Slope
215D: Pence-----	Slope
315A: Rib-----	Wetness Susceptible to rutting and wheel slippage
337A: Plover-----	Wetness
368B: Mahtomedi-----	No major considerations
Cress-----	No major considerations
368C: Mahtomedi-----	Slope
Cress-----	Slope
368D: Mahtomedi-----	Slope
Cress-----	Slope
371A: Crowell-----	No major considerations
380B: Cress-----	No major considerations
Rosholt-----	No major considerations
380C: Cress-----	Slope
Rosholt-----	Slope
380D: Cress-----	Slope
Rosholt-----	Slope
383B: Mahtomedi-----	No major considerations
383C: Mahtomedi-----	Slope
383D: Mahtomedi-----	Slope
396B: Friendship-----	No major considerations
Wurtsmith-----	No major considerations
Grayling-----	No major considerations
397A: Perchlake-----	Wetness

Table 13.--Forest Log Landing Considerations--Continued

Map symbol and soil name	Forest log landing considerations
399B: Grayling-----	No major considerations
399C: Grayling-----	Slope
399D: Grayling-----	Slope
405A: Lupton-----	Wetness Susceptible to rutting and wheel slippage
Cathro-----	Wetness Susceptible to rutting and wheel slippage
Tawas-----	Wetness Susceptible to rutting and wheel slippage
406A: Loxley-----	Wetness Susceptible to rutting and wheel slippage
407A: Seelyeville-----	Wetness Susceptible to rutting and wheel slippage
Markey-----	Wetness Susceptible to rutting and wheel slippage
410A: Seelyeville-----	Wetness Susceptible to rutting and wheel slippage
Cathro-----	Wetness Susceptible to rutting and wheel slippage
412A: Rifle-----	Wetness Susceptible to rutting and wheel slippage
Tacoosh-----	Wetness Susceptible to rutting and wheel slippage
415A: Greenwood-----	Wetness Susceptible to rutting and wheel slippage
439B: Graycalm-----	No major considerations
Menahga-----	No major considerations
439C: Graycalm-----	Slope
Menahga-----	Slope
439D: Graycalm-----	Slope
Menahga-----	Slope

Table 13.--Forest Log Landing Considerations--Continued

Map symbol and soil name	Forest log landing considerations
441C:	
Freeon-----	Slope Wetness
Cathro-----	Wetness Susceptible to rutting and wheel slippage
442C:	
Haugen-----	Slope Wetness
Greenwood-----	Wetness Susceptible to rutting and wheel slippage
443D:	
Amery-----	Slope
Greenwood-----	Wetness Susceptible to rutting and wheel slippage
461A:	
Bowstring-----	Flooding Wetness Susceptible to rutting and wheel slippage
484A:	
Greenwood-----	Wetness Susceptible to rutting and wheel slippage
Beseman-----	Wetness Susceptible to rutting and wheel slippage
495B:	
Karlsborg-----	Wetness
Grettum-----	No major considerations
Perida-----	Wetness
495C:	
Karlsborg-----	Slope Wetness
Grettum-----	Slope
Perida-----	Slope Wetness
495D:	
Karlsborg-----	Slope Wetness
Grettum-----	Slope
Perida-----	Slope Wetness
497A:	
Meenon-----	Wetness
515A:	
Manitowish-----	No major considerations

Table 13.--Forest Log Landing Considerations--Continued

Map symbol and soil name	Forest log landing considerations
521A: Dody-----	Wetness Susceptible to rutting and wheel slippage
524E: Rock outcrop.	
Frogcreek-----	Slope Wetness Areas of rock outcrop
Metonga-----	Slope Areas of rock outcrop
542B: Haugen, very stony-----	Wetness
Haugen-----	Wetness
542C: Haugen, very stony-----	Slope Wetness
Haugen-----	Slope Wetness
543B: Anigon-----	Susceptible to rutting and wheel slippage
543C2: Anigon-----	Slope Susceptible to rutting and wheel slippage
544F: Menahga-----	Slope
Mahtomedi-----	Slope
555A: Fordum-----	Flooding Wetness Susceptible to rutting and wheel slippage
574B: Sayner-----	No major considerations
574C: Sayner-----	Slope
574E: Sayner-----	Slope
579B: Parkfalls-----	Wetness
600A: Haplosaprists-----	Onsite investigation required
Psammaquents-----	Onsite investigation required
615B: Cress-----	No major considerations

Table 13.--Forest Log Landing Considerations--Continued

Map symbol and soil name	Forest log landing considerations
615C: Cress-----	Slope
615D: Cress-----	Slope
623A: Capitola-----	Wetness Susceptible to rutting and wheel slippage
624A: Ossmer-----	Wetness
632A: Aftad-----	Wetness
632B: Aftad-----	Wetness
632C: Aftad-----	Slope Wetness
633F: Pence-----	Slope
Padus-----	Slope
648B: Sconsin-----	Wetness
670C: Keweenaw-----	Slope
Pence-----	Slope
670E: Keweenaw-----	Slope
Pence-----	Slope
671B: Spoonershill, stony-----	Wetness
Spoonershill-----	Wetness
680B: Stanberry, stony-----	Wetness
Pence, stony-----	No major considerations
683A: Tipler-----	No major considerations
706A: Winterfield-----	Flooding Wetness
Totagatic-----	Flooding Wetness

Table 13.--Forest Log Landing Considerations--Continued

Map symbol and soil name	Forest log landing considerations
724A: Rib-----	Wetness Areas of rock outcrop Susceptible to rutting and wheel slippage
Rock outcrop.	
726B: Sissabagama-----	Wetness
733A: Wozny-----	Wetness Susceptible to rutting and wheel slippage
771A: Lenroot-----	No major considerations
827A: Scoba-----	No major considerations
853C: Frogcreek-----	Slope Wetness
Stinnett-----	Wetness
Wozny-----	Wetness Susceptible to rutting and wheel slippage
856B: Stinnett-----	Wetness
857B: Frogcreek-----	Wetness
857C: Frogcreek-----	Slope Wetness
873B: Stanberry-----	Wetness
873C: Stanberry-----	Slope Wetness
873D: Stanberry-----	Slope Wetness
905A: Cublake-----	Wetness
926A: Flink-----	Wetness
943D: Stanberry-----	Slope Wetness
Greenwood-----	Wetness Susceptible to rutting and wheel slippage



Table 13.--Forest Log Landing Considerations--Continued

Map symbol and soil name	Forest log landing considerations
948A: Billyboy-----	No major considerations
970C: Keweenaw-----	Slope
Pence-----	Slope
Greenwood-----	Wetness Susceptible to rutting and wheel slippage
970E: Keweenaw-----	Slope
Pence-----	Slope
Greenwood-----	Wetness Susceptible to rutting and wheel slippage
1070C: Fremstadt-----	Slope
Cress-----	Slope
1070D: Fremstadt-----	Slope
Cress-----	Slope
1080B: Spoonerhill-----	Wetness
Spoonerhill, stony-----	Wetness
Cress-----	No major considerations
1653C: Stanberry-----	Slope Wetness
Parkfalls-----	Wetness
Wozny-----	Wetness Susceptible to rutting and wheel slippage
2015. Pits	
2050. Landfill	
3011A: Barronett-----	Wetness Susceptible to rutting and wheel slippage
3125A: Meehan-----	Wetness
3126A: Wurtsmith-----	No major considerations
3276A: Au Gres-----	Wetness

Table 13.--Forest Log Landing Considerations--Continued

Map symbol and soil name	Forest log landing considerations
3312B: Glendenning, very stony-----	Wetness
Glendenning-----	Wetness
3336A: Fenander-----	Wetness
3403A: Loxley-----	Wetness Susceptible to rutting and wheel slippage
Beseman-----	Wetness Susceptible to rutting and wheel slippage
Dawson-----	Wetness Susceptible to rutting and wheel slippage
3424C: Frogcreek-----	Slope Wetness
Magroc-----	Wetness
Stinnett-----	Wetness
Rock outcrop.	
3446A: Newson-----	Wetness Susceptible to rutting and wheel slippage
3448B: Grettum-----	No major considerations
3448C: Grettum-----	Slope
3516A: Slimlake-----	No major considerations
3629B: Perida-----	Wetness
M-W. Miscellaneous water	
W. Water	

Table 14.--Forest Land Site Preparation and Planting Considerations  
(See text for a description of the considerations listed in this table)

Map symbol and soil name	Forest land site preparation and planting considerations
3A: Totagatic-----	Flooding Wetness
Bowstring-----	Flooding Wetness
Ausable-----	Flooding Wetness
22A: Comstock-----	Wetness Potential poor tilth and compaction
24A: Poskin-----	Wetness Cobbly surface
27A: Scott Lake-----	Cobbly surface
28B: Haugen, very stony-----	Wetness Surface stones Cobbly surface
Haugen-----	Wetness Cobbly surface
Rosholt, very stony-----	Surface stones Cobbly surface
Rosholt-----	Cobbly surface
28C: Haugen, very stony-----	Wetness Surface stones Cobbly surface Water erosion
Haugen-----	Wetness Cobbly surface Water erosion
Rosholt, very stony-----	Surface stones Cobbly surface Water erosion
Rosholt-----	Cobbly surface Water erosion
33B: Chetek-----	Cobbly surface
33C: Chetek-----	Cobbly surface Water erosion
38A: Rosholt-----	Cobbly surface

Table 14.--Forest Land Site Preparation and Planting  
Considerations--Continued

Map symbol and soil name	Forest land site preparation and planting considerations
38B: Rosholt-----	Cobbly surface
38C: Rosholt-----	Cobbly surface Water erosion
38D: Rosholt-----	Slope Cobbly surface Water erosion
42D: Amery-----	Slope Surface stones Cobbly surface Water erosion
43B: Antigo-----	Cobbly surface
43C: Antigo-----	Cobbly surface Water erosion
43D: Antigo-----	Slope Cobbly surface Water erosion
48A: Brill-----	Wetness Cobbly surface
63A: Crystal Lake-----	Wetness Potential poor tilth and compaction
63B: Crystal Lake-----	Wetness Potential poor tilth and compaction
63C: Crystal Lake-----	Wetness Water erosion Potential poor tilth and compaction
63E: Crystal Lake-----	Slope Wetness Water erosion Potential poor tilth and compaction
64A: Totagatic-----	Flooding Wetness
Winterfield-----	Flooding Wetness

Table 14.--Forest Land Site Preparation and Planting  
Considerations--Continued

Map symbol and soil name	Forest land site preparation and planting considerations
69B:	
Keweenaw-----	Surface stones
Sayner-----	Surface stones Cobbly surface
Vilas-----	Surface stones
69C:	
Keweenaw-----	Surface stones Water erosion
Sayner-----	Surface stones Cobbly surface Water erosion
Vilas-----	Surface stones Water erosion
69E:	
Keweenaw-----	Slope Surface stones Water erosion
Sayner-----	Slope Surface stones Cobbly surface Water erosion
Vilas-----	Slope Surface stones Water erosion
74B:	
Vilas-----	No major considerations
74C:	
Vilas-----	Water erosion
74D:	
Vilas-----	Slope Water erosion
100B:	
Menahga-----	No major considerations
100C:	
Menahga-----	Water erosion
100D:	
Menahga-----	Slope Water erosion
127D:	
Amery-----	Slope Surface stones Cobbly surface Water erosion
Rosholt-----	Slope Surface stones Cobbly surface Water erosion

Table 14.--Forest Land Site Preparation and Planting  
Considerations--Continued

Map symbol and soil name	Forest land site preparation and planting considerations
127E:	
Amery-----	Slope Surface stones Cobbly surface Water erosion
Rosholt-----	Slope Surface stones Cobbly surface Water erosion
156B:	
Magnor, very stony-----	Wetness Surface stones Cobbly surface
Magnor-----	Wetness
157B:	
Freeon, very stony-----	Wetness Surface stones Cobbly surface
Freeon-----	Wetness
157C:	
Freeon, very stony-----	Wetness Surface stones Cobbly surface Water erosion
Freeon-----	Wetness Water erosion
160A:	
Oesterle-----	Wetness Cobbly surface
182B:	
Padus-----	Cobbly surface
182C:	
Padus-----	Cobbly surface Water erosion
192A:	
Worcester-----	Wetness Cobbly surface
193A:	
Minocqua-----	Wetness
215B:	
Pence-----	Cobbly surface
215C:	
Pence-----	Cobbly surface Water erosion
215D:	
Pence-----	Slope Cobbly surface Water erosion

Table 14.--Forest Land Site Preparation and Planting  
Considerations--Continued

Map symbol and soil name	Forest land site preparation and planting considerations
315A: Rib-----	Wetness Cobbly surface Potential poor tilth and compaction
337A: Plover-----	Wetness
368B: Mahtomedi-----	Cobbly surface
Cress-----	Cobbly surface
368C: Mahtomedi-----	Cobbly surface Water erosion
Cress-----	Cobbly surface Water erosion
368D: Mahtomedi-----	Slope Cobbly surface Water erosion
Cress-----	Slope Cobbly surface Water erosion
371A: Crowell-----	No major considerations
380B: Cress-----	Cobbly surface
Rosholt-----	Cobbly surface
380C: Cress-----	Cobbly surface Water erosion
Rosholt-----	Cobbly surface Water erosion
380D: Cress-----	Slope Cobbly surface Water erosion
Rosholt-----	Slope Cobbly surface Water erosion
383B: Mahtomedi-----	Cobbly surface
383C: Mahtomedi-----	Cobbly surface Water erosion
383D: Mahtomedi-----	Slope Cobbly surface Water erosion

Table 14.--Forest Land Site Preparation and Planting  
Considerations--Continued

Map symbol and soil name	Forest land site preparation and planting considerations
396B:	
Friendship-----	No major considerations
Wurtsmith-----	No major considerations
Grayling-----	No major considerations
397A:	
Perchlake-----	Wetness
399B:	
Grayling-----	No major considerations
399C:	
Grayling-----	Water erosion
399D:	
Grayling-----	Slope Water erosion
405A:	
Lupton-----	Wetness
Cathro-----	Wetness
Tawas-----	Wetness
406A:	
Loxley-----	Wetness
407A:	
Seelyeville-----	Wetness
Markey-----	Wetness
410A:	
Seelyeville-----	Wetness
Cathro-----	Wetness
412A:	
Rifle-----	Wetness
Tacoosh-----	Wetness
415A:	
Greenwood-----	Wetness
439B:	
Graycalm-----	Cobbly surface
Menahga-----	No major considerations
439C:	
Graycalm-----	Cobbly surface Water erosion
Menahga-----	Water erosion
439D:	
Graycalm-----	Slope Cobbly surface Water erosion



Table 14.--Forest Land Site Preparation and Planting  
Considerations--Continued

Map symbol and soil name	Forest land site preparation and planting considerations
439D: Menahga-----	Slope Water erosion
441C: Freeon-----	Wetness Surface stones Cobbly surface Water erosion
Cathro-----	Wetness
442C: Haugen-----	Wetness Surface stones Cobbly surface Water erosion
Greenwood-----	Wetness
443D: Amery-----	Slope Surface stones Cobbly surface Water erosion
Greenwood-----	Wetness
461A: Bowstring-----	Flooding Wetness
484A: Greenwood-----	Wetness
Beseman-----	Wetness
495B: Karlsborg-----	Wetness
Grettum-----	No major considerations
Perida-----	Wetness
495C: Karlsborg-----	Wetness Water erosion
Grettum-----	Water erosion
Perida-----	Wetness Water erosion
495D: Karlsborg-----	Slope Wetness Water erosion
Grettum-----	Slope Water erosion
Perida-----	Slope Wetness Water erosion

Table 14.--Forest Land Site Preparation and Planting  
Considerations--Continued

Map symbol and soil name	Forest land site preparation and planting considerations
497A: Meenon-----	Wetness
515A: Manitowish-----	Cobbly surface
521A: Dody-----	Wetness
524E: Rock outcrop.	
Frogcreek-----	Wetness Surface stones Areas of rock outcrop Cobbly surface Water erosion
Metonga-----	Slope Surface stones Areas of rock outcrop Cobbly surface Water erosion
542B: Haugen, very stony-----	Wetness Surface stones Cobbly surface
Haugen-----	Wetness Cobbly surface
542C: Haugen, very stony-----	Wetness Surface stones Cobbly surface Water erosion
Haugen-----	Wetness Cobbly surface Water erosion
543B: Anigon-----	Cobbly surface
543C2: Anigon-----	Cobbly surface Water erosion
544F: Menahga-----	Slope Water erosion
Mahtomedi-----	Slope Cobbly surface Water erosion
555A: Fordum-----	Flooding Wetness Cobbly surface Potential poor tilth and compaction

Table 14.--Forest Land Site Preparation and Planting  
Considerations--Continued

Map symbol and soil name	Forest land site preparation and planting considerations
574B: Sayner-----	Cobbly surface
574C: Sayner-----	Cobbly surface Water erosion
574E: Sayner-----	Slope Cobbly surface Water erosion
579B: Parkfalls-----	Wetness Surface stones
600A: Haplosaprists-----	Onsite investigation required
Psammaquents-----	Onsite investigation required
615B: Cress-----	Cobbly surface
615C: Cress-----	Cobbly surface Water erosion
615D: Cress-----	Slope Cobbly surface Water erosion
623A: Capitola-----	Wetness Surface stones
624A: Ossmer-----	Wetness Cobbly surface
632A: Aftad-----	Wetness
632B: Aftad-----	Wetness
632C: Aftad-----	Wetness Water erosion
633F: Pence-----	Slope Cobbly surface Water erosion
Padus-----	Slope Cobbly surface Water erosion
648B: Sconsin-----	Wetness Cobbly surface

Table 14.--Forest Land Site Preparation and Planting  
Considerations--Continued

Map symbol and soil name	Forest land site preparation and planting considerations
670C:	
Keweenaw-----	Surface stones Cobbly surface Water erosion
Pence-----	Surface stones Cobbly surface Water erosion
670E:	
Keweenaw-----	Slope Surface stones Cobbly surface Water erosion
Pence-----	Slope Surface stones Cobbly surface Water erosion
671B:	
Spoonerhill, stony-----	Wetness Surface stones Cobbly surface
Spoonerhill-----	Wetness Cobbly surface
680B:	
Stanberry, stony-----	Wetness Surface stones
Pence, stony-----	Surface stones Cobbly surface
683A:	
Tipler-----	Cobbly surface
706A:	
Winterfield-----	Flooding Wetness
Totagatic-----	Flooding Wetness
724A:	
Rib-----	Wetness Areas of rock outcrop Cobbly surface Potential poor tilth and compaction
Rock outcrop.	
726B:	
Sissabagama-----	Wetness
733A:	
Wozny-----	Wetness Surface stones
771A:	
Lenroot-----	No major considerations

Table 14.--Forest Land Site Preparation and Planting  
Considerations--Continued

Map symbol and soil name	Forest land site preparation and planting considerations
827A: Scoba-----	Cobbly surface
853C: Frogcreek-----	Wetness Surface stones Cobbly surface Water erosion
Stinnett-----	Wetness Surface stones Cobbly surface
Wozny-----	Wetness Surface stones
856B: Stinnett-----	Wetness Surface stones Cobbly surface
857B: Frogcreek-----	Wetness Surface stones Cobbly surface
857C: Frogcreek-----	Wetness Surface stones Cobbly surface Water erosion
873B: Stanberry-----	Wetness Surface stones
873C: Stanberry-----	Wetness Surface stones Water erosion
873D: Stanberry-----	Slope Wetness Surface stones Water erosion
905A: Cublake-----	Wetness
926A: Flink-----	Wetness
943D: Stanberry-----	Slope Wetness Surface stones Water erosion
Greenwood-----	Wetness
948A: Billyboy-----	Cobbly surface

Table 14.--Forest Land Site Preparation and Planting  
Considerations--Continued

Map symbol and soil name	Forest land site preparation and planting considerations
970C:	
Keweenaw-----	Surface stones Cobbly surface Water erosion
Pence-----	Surface stones Cobbly surface Water erosion
Greenwood-----	Wetness
970E:	
Keweenaw-----	Slope Surface stones Cobbly surface Water erosion
Pence-----	Slope Surface stones Water erosion
Greenwood-----	Wetness
1070C:	
Fremstadt-----	Surface stones Cobbly surface Water erosion
Cress-----	Cobbly surface Water erosion
1070D:	
Fremstadt-----	Slope Surface stones Cobbly surface Water erosion
Cress-----	Slope Cobbly surface Water erosion
1080B:	
Spoonerhill-----	Wetness Cobbly surface
Spoonerhill, stony-----	Wetness Surface stones Cobbly surface
Cress-----	Cobbly surface
1653C:	
Stanberry-----	Wetness Surface stones Water erosion
Parkfalls-----	Wetness Surface stones
Wozny-----	Wetness Surface stones
2015. Pits	

Table 14.--Forest Land Site Preparation and Planting  
Considerations--Continued

Map symbol and soil name	Forest land site preparation and planting considerations
2050. Landfill	
3011A: Barronett-----	Wetness Potential poor tilth and compaction
3125A: Meehan-----	Wetness
3126A: Wurtsmith-----	No major considerations
3276A: Au Gres-----	Wetness
3312B: Glendenning, very stony-----	Wetness Surface stones Cobbly surface
Glendenning-----	Wetness Cobbly surface
3336A: Fenander-----	Wetness
3403A: Loxley-----	Wetness
Beseman-----	Wetness
Dawson-----	Wetness
3424C: Frogcreek-----	Wetness Surface stones Cobbly surface Water erosion
Magroc-----	Wetness Surface stones Cobbly surface
Stinnett-----	Wetness Surface stones Cobbly surface
Rock outcrop.	
3446A: Newson-----	Wetness
3448B: Grettum-----	No major considerations
3448C: Grettum-----	Water erosion
3516A: Slimlake-----	Cobbly surface
3629B: Perida-----	Wetness

Table 14.--Forest Land Site Preparation and Planting  
Considerations--Continued

Map symbol and soil name	Forest land site preparation and planting considerations
M-W. Miscellaneous water	
W. Water	



Table 15.--Forest Habitat Types

(Absence of an entry indicates that no forest habitat type is applicable. See text for descriptions of the forest habitat types listed in this table)

Map symbol and map unit name	Dominant habitat type	Codominant habitat types	Common habitat types	Region
3A----- Totagatic-Bowstring-Ausable complex, 0 to 2 percent slopes, frequently flooded	Lfp			
22A----- Comstock silt loam, 0 to 3 percent slopes	ASaI		ACaCi	1
24A----- Poskin silt loam, 0 to 3 percent slopes	ASaI		ACaCi	1
27A----- Scott Lake sandy loam, 0 to 3 percent slopes	AVDe			1
28B----- Haugen-Rosholt complex, 2 to 6 percent slopes, very stony		AVDe, AAt		1
28C----- Haugen-Rosholt complex, 6 to 12 percent slopes, very stony		AVDe, AAt		1
33B----- Chetek sandy loam, 1 to 6 percent slopes	AVDe			1
33C----- Chetek sandy loam, 6 to 12 percent slopes	AVDe			1
38A----- Rosholt sandy loam, 0 to 2 percent slopes		AVDe, AAt		1
38B----- Rosholt sandy loam, 2 to 6 percent slopes		AVDe, AAt		1
38C----- Rosholt sandy loam, 6 to 12 percent slopes		AVDe, AAt		1
38D----- Rosholt sandy loam, 12 to 20 percent slopes		AVDe, AAt		1
42D----- Amery sandy loam, 12 to 25 percent slopes, very stony		AVDe, AAt		1
43B----- Antigo silt loam, 1 to 6 percent slopes	ACaCi			1

Table 15.--Forest Habitat Types--Continued

Map symbol and map unit name	Dominant habitat type	Codominant habitat types	Common habitat types	Region
43C----- Antigo silt loam, 6 to 15 percent slopes	ACaCi			1
43D----- Antigo silt loam, 15 to 30 percent slopes	ACaCi			1
48A----- Brill silt loam, 0 to 3 percent slopes	ACaCi			1
63A----- Crystal Lake silt loam, 0 to 2 percent slopes	ACaCi			1
63B----- Crystal Lake silt loam, 2 to 6 percent slopes	ACaCi			1
63C----- Crystal Lake silt loam, 6 to 12 percent slopes	ACaCi			1
63E----- Crystal Lake silt loam, 20 to 35 percent slopes	ACaCi			1
64A----- Totagatic-Winterfield complex, 0 to 2 percent slopes, frequently flooded		Lfp, ArVRp		1
69B----- Keweenaw-Sayner-Vilas complex, 2 to 6 percent slopes, stony		PARVAm, AVDe		1
69C----- Keweenaw-Sayner-Vilas complex, 6 to 15 percent slopes, stony		PARVAm, AVDe		1
69E----- Keweenaw-Sayner-Vilas complex, 15 to 45 percent slopes, stony		PARVAm, AVDe		1
74B----- Vilas loamy sand, 0 to 6 percent slopes	PARVAa			3
74C----- Vilas loamy sand, 6 to 15 percent slopes	PARVAa			3
74D----- Vilas loamy sand, 15 to 30 percent slopes	PARVAa			3
100B----- Menahga sand, 0 to 6 percent slopes	PQGCe		PARVAm	1

Table 15.--Forest Habitat Types--Continued

Map symbol and map unit name	Dominant habitat type	Codominant habitat types	Common habitat types	Region
100C----- Menahga sand, 6 to 12 percent slopes	PQGCe		PArVAm	1
100D----- Menahga sand, 12 to 30 percent slopes	PQGCe		PArVAm	1
127D----- Amery-Rosholt complex, 12 to 20 percent slopes, very stony		AVDe, AAt		1
127E----- Amery-Rosholt complex, 20 to 45 percent slopes, very stony		AVDe, AAt		1
156B----- Magnor, very stony-Magnor complex, 0 to 4 percent slopes		ASaI, AAt		1
157B----- Freeon, very stony-Freeon complex, 2 to 6 percent slopes	AAt		ACaCi	1
157C----- Freeon, very stony-Freeon complex, 6 to 12 percent slopes	AAt		ACaCi	1
160A----- Oesterle sandy loam, 0 to 2 percent slopes	ArVRp		AVDe	1
182B----- Padus sandy loam, 0 to 6 percent slopes	ATM			3
182C----- Padus sandy loam, 6 to 15 percent slopes	ATM			3
192A----- Worcester sandy loam, 0 to 3 percent slopes	TMC			3
193A----- Minocqua muck, 0 to 2 percent slopes	Lwmin			
215B----- Pence sandy loam, 0 to 6 percent slopes	AVVb			3
215C----- Pence sandy loam, 6 to 15 percent slopes	AVVb			3

Table 15.--Forest Habitat Types--Continued

Map symbol and map unit name	Dominant habitat type	Codominant habitat types	Common habitat types	Region
215D----- Pence sandy loam, 15 to 30 percent slopes	AVVb			3
315A----- Rib silt loam, 0 to 2 percent slopes	Lwmin			
337A----- Plover fine sandy loam, 0 to 3 percent slopes	ArVRp			1
368B----- Mahtomedi-Cress complex, 2 to 6 percent slopes		PArVAm, AVDe		1
368C----- Mahtomedi-Cress complex, 6 to 12 percent slopes		PArVAm, AVDe		1
368D----- Mahtomedi-Cress complex, 12 to 25 percent slopes		PArVAm, AVDe		1
371A----- Croswell loamy sand, 0 to 3 percent slopes	PArVAa			3
380B----- Cress-Rosholt complex, 2 to 6 percent slopes		AVDe, AAt		1
380C----- Cress-Rosholt complex, 6 to 12 percent slopes		AVDe, AAt		1
380D----- Cress-Rosholt complex, 12 to 25 percent slopes		AVDe, AAt		1
383B----- Mahtomedi loamy sand, 0 to 6 percent slopes	PArVAm		PQGCe	1
383C----- Mahtomedi loamy sand, 6 to 12 percent slopes	PArVAm		PQGCe	1
383D----- Mahtomedi loamy sand, 12 to 30 percent slopes	PArVAm		PQGCe	1
396B----- Friendship-Wurtsmith- Grayling complex, 0 to 6 percent slopes	PQGCe			1
397A----- Perchlake loamy fine sand, 0 to 2 percent slopes	ArVRp		PArVAm	1

Table 15.--Forest Habitat Types--Continued

Map symbol and map unit name	Dominant habitat type	Codominant habitat types	Common habitat types	Region
399B----- Grayling sand, 0 to 6 percent slopes	PQGCe			1
399C----- Grayling sand, 6 to 12 percent slopes	PQGCe			1
399D----- Grayling sand, 12 to 30 percent slopes	PQGCe			1
405A----- Lupton, Cathro, and Tawas soils, 0 to 1 percent slopes	Lnorg			
406A----- Loxley mucky peat, 0 to 1 percent slopes	Lnorg			
407A----- Seelyeville and Markey soils, 0 to 1 percent slopes	Lnorg			
410A----- Seelyeville and Cathro soils, 0 to 1 percent slopes	Lnorg			
412A----- Rifle and Tacoosh soils, 0 to 1 percent slopes	Lnorg			
415A----- Greenwood mucky peat, 0 to 1 percent slopes	Lnorg			
439B----- Graycalm-Menahga complex, 0 to 6 percent slopes	PArVAm		PQGCe	1
439C----- Graycalm-Menahga complex, 6 to 12 percent slopes	PArVAm		PQGCe	1
439D----- Graycalm-Menahga complex, 12 to 30 percent slopes	PArVAm		PQGCe	1
441C----- Freeon, very stony-Cathro complex, 0 to 15 percent slopes		AAAt, AVDe	Lnorg	1
442C----- Haugen, very stony- Greenwood complex, 0 to 15 percent slopes		AVDe, AAAt	Laorg	1

Table 15.--Forest Habitat Types--Continued

Map symbol and map unit name	Dominant habitat type	Codominant habitat types	Common habitat types	Region
443D----- Amery, very stony-Greenwood complex, 0 to 35 percent slopes		AVDe, AAt	Laorg	1
461A----- Bowstring muck, 0 to 1 percent slopes, frequently flooded	Lfp			
484A----- Greenwood and Beseman soils, 0 to 1 percent slopes	Laorg			
495B----- Karlsborg-Grettum-Perida complex, 1 to 6 percent slopes	PARVAm			1
495C----- Karlsborg-Grettum-Perida complex, 6 to 12 percent slopes	PARVAm			1
495D----- Karlsborg-Grettum-Perida complex, 12 to 30 percent slopes	PARVAm			1
497A----- Meenon loamy sand, 0 to 3 percent slopes		ArVRp, PARVam		1
515A----- Manitowish sandy loam, 0 to 3 percent slopes	AVVb			3
521A----- Dody muck, 0 to 2 percent slopes	Lwmin			
524E----- Rock outcrop-Frogcreek- Metonga complex, 2 to 45 percent slopes, very stony	ATM			3
542B----- Haugen, very stony-Haugen complex, 2 to 6 percent slopes		AAt, AVDe		1
542C----- Haugen, very stony-Haugen complex, 6 to 12 percent slopes		AAt, AVDe		1
543B----- Anigon silt loam, 2 to 6 percent slopes	ACaCi			1

Table 15.--Forest Habitat Types--Continued

Map symbol and map unit name	Dominant habitat type	Codominant habitat types	Common habitat types	Region
543C2----- Anigon silt loam, 6 to 12 percent slopes, eroded	ACaCi			1
544F----- Menahga and Mahtomedi soils, 30 to 45 percent slopes	PARVAm		PQGCe	1
555A----- Fordum silt loam, 0 to 2 percent slopes, frequently flooded	Lfp			
574B----- Sayner loamy sand, 0 to 6 percent slopes	PARVAa			3
574C----- Sayner loamy sand, 6 to 15 percent slopes	PARVAa			3
574E----- Sayner loamy sand, 15 to 45 percent slopes	PARVAa			3
579B----- Parkfalls sandy loam, 0 to 4 percent slopes, very stony	TMC		ATM	3
600A. Haplosaprists and Psammaquents, 0 to 2 percent slopes				
615B----- Cress sandy loam, 0 to 6 percent slopes	AVDe			1
615C----- Cress sandy loam, 6 to 12 percent slopes	AVDe			1
615D----- Cress sandy loam, 12 to 30 percent slopes	AVDe			1
623A----- Capitola muck, 0 to 2 percent slopes, very stony	Lwmin			
624A----- Ossmer silt loam, 0 to 3 percent slopes	ASaI		AAt	1
632A----- Aftad fine sandy loam, 0 to 2 percent slopes		AAt, ACaCi		1

Table 15.--Forest Habitat Types--Continued

Map symbol and map unit name	Dominant habitat type	Codominant habitat types	Common habitat types	Region
632B----- Aftad fine sandy loam, 2 to 6 percent slopes		AAAt, ACaCi		1
632C----- Aftad fine sandy loam, 6 to 12 percent slopes		AAAt, ACaCi		1
633F----- Pence and Padus soils, 30 to 45 percent slopes		AVVb, ATM		3
648B----- Sconsin silt loam, 1 to 6 percent slopes	ACaCi			1
670C----- Keweenaw-Pence complex, 6 to 15 percent slopes, stony	AVDe			1
670E----- Keweenaw-Pence complex, 15 to 45 percent slopes, stony	AVDe			1
671B----- Spoonershill, stony- Spoonershill complex, 2 to 6 percent slopes	AVDe		PARVAm	1
680B----- Stanberry-Pence complex, 2 to 6 percent slopes, stony	ATM		AVVb	3
683A----- Tipler sandy loam, 0 to 3 percent slopes	ATM			
706A----- Winterfield-Totagatic complex, 0 to 2 percent slopes, frequently flooded		ASaI, Lfp		1
724A----- Rib-Rock outcrop complex, 0 to 2 percent slopes	Lwmin			
726B----- Sissabagama loamy sand, 0 to 6 percent slopes		PARVAm, AVDe		1
733A----- Wozny muck, 0 to 2 percent slopes, very stony	Lwmin			
771A----- Lenroot loamy sand, 0 to 3 percent slopes	PARVAm			1



Table 15.--Forest Habitat Types--Continued

Map symbol and map unit name	Dominant habitat type	Codominant habitat types	Common habitat types	Region
827A----- Scoba sandy loam, 0 to 3 percent slopes		AAAt, AVDe		1
853C----- Frogcreek-Stinnett-Wozny complex, 0 to 15 percent slopes, very stony		ATM, ATAtOn	Lwmin	3
856B----- Stinnett silt loam, 0 to 4 percent slopes, very stony		ACaI, ATAtOn	ATM	3
857B----- Frogcreek silt loam, 2 to 6 percent slopes, very stony		ATM, AOCa	ATD	3
857C----- Frogcreek silt loam, 6 to 15 percent slopes, very stony		AOCa, ATM	ATD	3
873B----- Stanberry sandy loam, 1 to 6 percent slopes, very stony	ATM			3
873C----- Stanberry sandy loam, 6 to 15 percent slopes, very stony	ATM			3
873D----- Stanberry sandy loam, 15 to 30 percent slopes, very stony	ATM			3
905A----- Cublake loamy sand, 0 to 3 percent slopes		PARVAa, AVVb		3
926A----- Flink loamy sand, 0 to 3 percent slopes	ArAbVC		PARVAa	3
943D----- Stanberry, very stony- Greenwood complex, 0 to 35 percent slopes	ATM		Laorg	3
948A----- Billyboy silt loam, 0 to 3 percent slopes	AAAt			1
970C----- Keweenaw, stony-Pence, stony-Greenwood complex, 0 to 15 percent slopes		AVDe, AAAt	Laorg	1
970E----- Keweenaw, stony-Pence, stony-Greenwood complex, 0 to 45 percent slopes		AVDe, AAAt	Laorg	1

Table 15.--Forest Habitat Types--Continued

Map symbol and map unit name	Dominant habitat type	Codominant habitat types	Common habitat types	Region
1070C----- Fremstadt, stony-Cress complex, 6 to 15 percent slopes		AVDe, PArVAm		1
1070D----- Fremstadt, stony-Cress complex, 15 to 30 percent slopes		AVDe, PArVAm		1
1080B----- Spoonershill-Spoonershill, stony-Cress complex, 1 to 6 percent slopes		AVDe, PArVAm		1
1653C----- Stanberry-Parkfalls-Wozny complex, 0 to 15 percent slopes, very stony		AVDe, PArVAm		1
2015. Pits		ATM, ATAtOn	Lwmin	3
2050. Landfill				
3011A----- Barronett silt loam, 0 to 2 percent slopes	Lwmin			1
3125A----- Meehan loamy sand, 0 to 2 percent slopes	ArVRp		PArVAm	1
3126A----- Wurtsmith loamy sand, 0 to 3 percent slopes	PArVAm			1
3276A----- Au Gres loamy sand, 0 to 3 percent slopes	ArAbVC		PArVaAa	3
3312B----- Glendenning, very stony- Glendenning complex, 0 to 4 percent slopes	ArVRp		AVDe	1
3336A----- Fenander fine sandy loam, 0 to 2 percent slopes	Lwmin			
3403A----- Loxley, Beseman, and Dawson soils, 0 to 1 percent slopes	Laorg			
3424C----- Frogcreek-Magroc-Stinnett complex, 0 to 15 percent slopes, very stony, rocky		ATM, ATAtOn		3

Table 15.--Forest Habitat Types--Continued

Map symbol and map unit name	Dominant habitat type	Codominant habitat types	Common habitat types	Region
3446A----- Newson muck, 0 to 2 percent slopes	Lwmin			
3448B----- Grettum loamy sand, 0 to 6 percent slopes	PArVAm			1
3448C----- Grettum loamy sand, 6 to 12 percent slopes	PArVAm			1
3516A----- Slimlake sandy loam, 0 to 3 percent slopes		PArVAm, AVDe		1
3629B----- Perida loamy sand, 0 to 4 percent slopes	PArVAm			1
M-W. Miscellaneous water				
W. Water				

Table 16a.--Recreational Development

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. "Not rated" indicates that data are not available or that no rating is applicable. See text for further explanation of ratings in this table)

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3A:						
Totagatic-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Flooding	1.00	Ponding	1.00	Flooding	1.00
	Ponding	1.00	Flooding	0.40	Ponding	1.00
Bowstring-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Flooding	1.00	Content of	1.00	Content of	1.00
	Content of	1.00	organic matter		organic matter	
	organic matter		Ponding	1.00	Flooding	1.00
	Ponding	1.00	Flooding	0.40	Ponding	1.00
Ausable-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Flooding	1.00	Ponding	1.00	Flooding	1.00
	Ponding	1.00	Flooding	0.40	Ponding	1.00
22A:						
Comstock-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
24A:						
Poskin-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
27A:						
Scott Lake-----	Not limited		Not limited		Somewhat limited	
					Gravel content	0.04
28B:						
Haugen, very stony--	Somewhat limited		Somewhat limited		Somewhat limited	
	Restricted	0.60	Restricted	0.60	Restricted	0.60
	permeability		permeability		permeability	
	Too stony	0.50	Too stony	0.50	Slope	0.50
	Depth to	0.39	Depth to	0.19	Too stony	0.50
	saturated zone		saturated zone		Depth to	0.39
					saturated zone	
					Gravel content	0.05
Haugen-----	Somewhat limited		Somewhat limited		Somewhat limited	
	Restricted	0.60	Restricted	0.60	Restricted	0.60
	permeability		permeability		permeability	
	Depth to	0.39	Depth to	0.19	Slope	0.50
	saturated zone		saturated zone		Depth to	0.39
					saturated zone	
					Gravel content	0.05
					Content of large	0.03
					stones	

Table 16a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
28B: Rosholt, very stony	Somewhat limited Too stony	0.50	Somewhat limited Too stony	0.50	Somewhat limited Slope Too stony Gravel content Content of large stones	0.50 0.50 0.03 0.01
Rosholt-----	Not limited		Not limited		Somewhat limited Slope Gravel content	0.50 0.04
28C: Haugen, very stony--	Somewhat limited Restricted permeability Too stony Depth to saturated zone Slope	0.60 0.50 0.39 0.04	Somewhat limited Restricted permeability Too stony Depth to saturated zone Slope	0.60 0.50 0.19 0.04	Very limited Slope Restricted permeability Too stony Depth to saturated zone Gravel content	1.00 0.60 0.50 0.39 0.05
Haugen-----	Somewhat limited Restricted permeability Depth to saturated zone Slope	0.60 0.39 0.04	Somewhat limited Restricted permeability Depth to saturated zone Slope	0.60 0.19 0.04	Very limited Slope Restricted permeability Depth to saturated zone Gravel content Content of large stones	1.00 0.60 0.39 0.05 0.03
Rosholt, very stony	Somewhat limited Too stony Slope	0.50 0.04	Somewhat limited Too stony Slope	0.50 0.04	Very limited Slope Too stony Gravel content Content of large stones	1.00 0.50 0.03 0.01
Rosholt-----	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope Gravel content	1.00 0.04
33B: Chetek-----	Not limited		Not limited		Somewhat limited Slope Gravel content Content of large stones	0.50 0.02 0.01
33C: Chetek-----	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope Gravel content Content of large stones	1.00 0.02 0.01
38A: Rosholt-----	Not limited		Not limited		Somewhat limited Gravel content	0.04

Table 16a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
38B: Rosholt-----	Not limited		Not limited		Somewhat limited Slope Gravel content	0.50 0.04
38C: Rosholt-----	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope Gravel content	1.00 0.04
38D: Rosholt-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.04
42D: Amery-----	Very limited Slope Too stony Restricted permeability	1.00 0.50 0.21	Very limited Slope Too stony Restricted permeability	1.00 0.50 0.21	Very limited Slope Too stony Restricted permeability Gravel content Content of large stones	1.00 0.50 0.21 0.05 0.03
43B: Antigo-----	Not limited		Not limited		Somewhat limited Slope	0.50
43C: Antigo-----	Somewhat limited Slope	0.37	Somewhat limited Slope	0.37	Very limited Slope	1.00
43D: Antigo-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
48A: Brill-----	Somewhat limited Depth to saturated zone	0.98	Somewhat limited Depth to saturated zone	0.75	Somewhat limited Depth to saturated zone	0.98
63A: Crystal Lake-----	Somewhat limited Depth to saturated zone Restricted permeability	0.39 0.21	Somewhat limited Restricted permeability Depth to saturated zone	0.21 0.19	Somewhat limited Depth to saturated zone Restricted permeability	0.39 0.21
63B: Crystal Lake-----	Somewhat limited Depth to saturated zone Restricted permeability	0.39 0.21	Somewhat limited Restricted permeability Depth to saturated zone	0.21 0.19	Somewhat limited Slope Depth to saturated zone Restricted permeability	0.50 0.39 0.21

Table 16a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
63C: Crystal Lake-----	Somewhat limited		Somewhat limited		Very limited	
	Depth to saturated zone	0.39	Restricted permeability	0.21	Slope	1.00
	Restricted permeability	0.21	Depth to saturated zone	0.19	Depth to saturated zone	0.39
	Slope	0.04	Slope	0.04	Restricted permeability	0.21
63E: Crystal Lake-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Restricted permeability	0.21	Restricted permeability	0.21	Restricted permeability	0.21
64A: Totagatic-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Ponding	1.00	Flooding	1.00
	Ponding	1.00	Flooding	0.40	Ponding	1.00
Winterfield-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Too sandy	0.79	Flooding	1.00
	Too sandy	0.79	Flooding	0.40	Too sandy	0.79
69B: Keweenaw-----	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.76	Too sandy	0.76	Too sandy	0.76
					Slope	0.50
					Content of large stones	0.01
Sayner-----	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.87	Too sandy	0.87	Too sandy	0.87
					Slope	0.50
					Content of large stones	0.05
					Gravel content	0.02
Vilas-----	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.87	Too sandy	0.87	Too sandy	0.87
					Slope	0.50
					Gravel content	0.04
69C: Keweenaw-----	Somewhat limited		Somewhat limited		Very limited	
	Too sandy	0.76	Too sandy	0.76	Slope	1.00
	Slope	0.16	Slope	0.16	Too sandy	0.76
					Content of large stones	0.01
Sayner-----	Somewhat limited		Somewhat limited		Very limited	
	Too sandy	0.87	Too sandy	0.87	Slope	1.00
	Slope	0.16	Slope	0.16	Too sandy	0.87
					Content of large stones	0.05
					Gravel content	0.02

Table 16a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
69C: Vilas-----	Somewhat limited		Somewhat limited		Very limited	
	Too sandy	0.87	Too sandy	0.87	Slope	1.00
	Slope	0.16	Slope	0.16	Too sandy	0.87
					Gravel content	0.04
69E: Keweenaw-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Too sandy	0.76	Too sandy	0.76	Too sandy	0.76
					Content of large stones	0.01
Sayner-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Too sandy	0.87	Too sandy	0.87	Too sandy	0.87
					Content of large stones	0.05
					Gravel content	0.02
Vilas-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Too sandy	0.87	Too sandy	0.87	Too sandy	0.87
					Gravel content	0.04
74B: Vilas-----	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.87	Too sandy	0.87	Too sandy	0.87
					Slope	0.12
					Gravel content	0.06
74C: Vilas-----	Somewhat limited		Somewhat limited		Very limited	
	Too sandy	0.87	Too sandy	0.87	Slope	1.00
	Slope	0.37	Slope	0.37	Too sandy	0.87
					Gravel content	0.06
74D: Vilas-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Too sandy	0.87	Too sandy	0.87	Too sandy	0.87
					Gravel content	0.06
100B: Menahga-----	Very limited		Very limited		Very limited	
	Too sandy	1.00	Too sandy	1.00	Too sandy	1.00
					Slope	0.12
100C: Menahga-----	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.04	Slope	0.04	Slope	1.00
100D: Menahga-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00



Table 16a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
127D:						
Amery-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Too stony	0.50	Too stony	0.50	Too stony	0.50
	Restricted	0.21	Restricted	0.21	Restricted	0.21
	permeability		permeability		permeability	
					Gravel content	0.05
					Content of large stones	0.03
Rosholt-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Too stony	0.50	Too stony	0.50	Too stony	0.50
					Gravel content	0.03
					Content of large stones	0.01
127E:						
Amery-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Too stony	0.50	Too stony	0.50	Too stony	0.50
	Restricted	0.21	Restricted	0.21	Restricted	0.21
	permeability		permeability		permeability	
					Gravel content	0.05
					Content of large stones	0.03
Rosholt-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Too stony	0.50	Too stony	0.50	Too stony	0.50
					Gravel content	0.03
					Content of large stones	0.01
156B:						
Magnor, very stony--	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Too stony	0.50	Too stony	0.50	Too stony	0.50
	Restricted	0.43	Restricted	0.43	Restricted	0.43
	permeability		permeability		permeability	
					Content of large stones	0.01
Magnor-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Restricted	0.43	Restricted	0.43	Restricted	0.43
	permeability		permeability		permeability	
157B:						
Freeon, very stony--	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Too stony	0.50	Too stony	0.50	Slope	0.50
	Restricted	0.43	Restricted	0.43	Too stony	0.50
	permeability		permeability		Restricted	0.43
					permeability	

Table 16a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
157B: Freeon-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.43	Restricted permeability	0.43	Slope	0.50
					Restricted permeability	0.43
					Content of large stones	0.01
157C: Freeon, very stony--	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too stony	0.50	Too stony	0.50	Slope	1.00
	Restricted permeability	0.43	Restricted permeability	0.43	Too stony	0.50
	Slope	0.04	Slope	0.04	Restricted permeability	0.43
Freeon-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.43	Restricted permeability	0.43	Slope	1.00
	Slope	0.04	Slope	0.04	Restricted permeability	0.43
					Content of large stones	0.01
160A: Oosterle-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
182B: Padus-----	Not limited		Not limited		Somewhat limited	
					Slope	0.12
					Gravel content	0.02
182C: Padus-----	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.37	Slope	0.37	Slope	1.00
					Gravel content	0.02
192A: Worcester-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
					Gravel content	0.02
193A: Minocqua-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
215B: Pence-----	Not limited		Not limited		Somewhat limited	
					Slope	0.12
					Content of large stones	0.01
					Gravel content	0.01

Table 16a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
215C: Pence-----	Somewhat limited Slope	0.37	Somewhat limited Slope	0.37	Very limited Slope Content of large stones Gravel content	1.00 0.01 0.01
215D: Pence-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Content of large stones Gravel content	1.00 0.01 0.01
315A: Rib-----	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
337A: Plover-----	Very limited Depth to saturated zone Restricted permeability	1.00 0.60	Very limited Depth to saturated zone Restricted permeability	1.00 0.60	Very limited Depth to saturated zone Restricted permeability	1.00 0.60
368B: Mahtomedi-----	Somewhat limited Too sandy	0.72	Somewhat limited Too sandy	0.72	Somewhat limited Too sandy Slope Gravel content	0.72 0.50 0.04
Cress-----	Not limited		Not limited		Somewhat limited Slope	0.50
368C: Mahtomedi-----	Somewhat limited Too sandy Slope	0.72 0.04	Somewhat limited Too sandy Slope	0.72 0.04	Very limited Slope Too sandy Gravel content	1.00 0.72 0.04
Cress-----	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
368D: Mahtomedi-----	Very limited Slope Too sandy	1.00 0.72	Very limited Slope Too sandy	1.00 0.72	Very limited Slope Too sandy Gravel content	1.00 0.72 0.04
Cress-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
371A: Croswell-----	Somewhat limited Too sandy Depth to saturated zone	0.87 0.39	Somewhat limited Too sandy Depth to saturated zone	0.87 0.19	Somewhat limited Too sandy Depth to saturated zone Gravel content	0.87 0.39 0.06

Table 16a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
380B:						
Cress-----	Not limited		Not limited		Somewhat limited Slope	0.50
Rosholt-----	Not limited		Not limited		Somewhat limited Slope Gravel content	0.50 0.04
380C:						
Cress-----	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
Rosholt-----	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope Gravel content	1.00 0.04
380D:						
Cress-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Rosholt-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.04
383B:						
Mahtomedi-----	Somewhat limited Too sandy	0.72	Somewhat limited Too sandy	0.72	Somewhat limited Too sandy Slope Gravel content	0.72 0.12 0.04
383C:						
Mahtomedi-----	Somewhat limited Too sandy Slope	0.72 0.04	Somewhat limited Too sandy Slope	0.72 0.04	Very limited Slope Too sandy Gravel content	1.00 0.72 0.04
383D:						
Mahtomedi-----	Very limited Slope Too sandy	1.00 0.72	Very limited Slope Too sandy	1.00 0.72	Very limited Slope Too sandy Gravel content	1.00 0.72 0.04
396B:						
Friendship-----	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Too sandy	1.00
Wurtsmith-----	Very limited Too sandy Depth to saturated zone	1.00 0.39	Very limited Too sandy Depth to saturated zone	1.00 0.19	Very limited Too sandy Depth to saturated zone Gravel content	1.00 0.39 0.06
Grayling-----	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Too sandy Slope	1.00 0.12
397A:						
Perchlake-----	Very limited Depth to saturated zone Too sandy	1.00 0.96	Very limited Depth to saturated zone Too sandy	1.00 0.96	Very limited Depth to saturated zone Too sandy	1.00 0.96

Table 16a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
399B: Grayling-----	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Too sandy Slope	1.00 0.12
399C: Grayling-----	Very limited Too sandy Slope	1.00 0.04	Very limited Too sandy Slope	1.00 0.04	Very limited Slope Too sandy	1.00 1.00
399D: Grayling-----	Very limited Too sandy Slope	1.00 1.00	Very limited Too sandy Slope	1.00 1.00	Very limited Slope Too sandy	1.00 1.00
405A: Lupton-----	Very limited Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00
Cathro-----	Very limited Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00
Tawas-----	Very limited Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00
406A: Loxley-----	Very limited Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00
407A: Seelyville-----	Very limited Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00
Markey-----	Very limited Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00

Table 16a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
410A: Seelyeville-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Content of organic matter	1.00	Content of organic matter	1.00	Content of organic matter	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
Cathro-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Content of organic matter	1.00	Content of organic matter	1.00	Content of organic matter	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
412A: Rifle-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
Tacoosh-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
415A: Greenwood-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Content of organic matter	1.00	Content of organic matter	1.00	Content of organic matter	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
439B: Graycalm-----	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.30	Too sandy	0.30	Too sandy	0.30
					Slope	0.12
Menahga-----	Not limited		Not limited		Somewhat limited	
					Slope	0.12
439C: Graycalm-----	Somewhat limited		Somewhat limited		Very limited	
	Too sandy	0.30	Too sandy	0.30	Slope	1.00
	Slope	0.04	Slope	0.04	Too sandy	0.30
Menahga-----	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.04	Slope	0.04	Slope	1.00
439D: Graycalm-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Too sandy	0.30	Too sandy	0.30	Too sandy	0.30
Menahga-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00

Table 16a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
441C: Freeon-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too stony	0.50	Too stony	0.50	Slope	1.00
	Restricted permeability	0.43	Restricted permeability	0.43	Too stony	0.50
	Slope	0.37	Slope	0.37	Restricted permeability	0.43
Cathro-----	Not rated		Not rated		Not rated	
442C: Haugen-----	Somewhat limited		Somewhat limited		Very limited	
	Restricted permeability	0.60	Restricted permeability	0.60	Slope	1.00
	Too stony	0.50	Too stony	0.50	Restricted permeability	0.60
	Depth to saturated zone	0.39	Depth to saturated zone	0.19	Too stony	0.50
					Depth to saturated zone	0.39
					Gravel content	0.05
Greenwood-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
443D: Amery-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Too stony	0.50	Too stony	0.50	Too stony	0.50
	Restricted permeability	0.21	Restricted permeability	0.21	Restricted permeability	0.21
					Gravel content	0.05
					Content of large stones	0.03
Greenwood-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
461A: Bowstring-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Content of organic matter	1.00	Content of organic matter	1.00
	Content of organic matter	1.00	Ponding	1.00	Flooding	1.00
	Ponding	1.00	Flooding	0.40	Ponding	1.00
484A: Greenwood-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00

Table 16a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
484A: Beseman-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Content of organic matter	1.00	Content of organic matter	1.00	Content of organic matter	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Restricted permeability	0.21	Restricted permeability	0.21	Restricted permeability	0.21
495B: Karlsborg-----	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.98	Restricted permeability	0.98	Depth to saturated zone	0.98
	Restricted permeability	0.98	Too sandy	0.81	Restricted permeability	0.98
	Too sandy	0.81	Depth to saturated zone	0.75	Too sandy	0.81
					Slope	0.50
Grettum-----	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.81	Too sandy	0.81	Too sandy	0.81
					Slope	0.50
Perida-----	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.81	Too sandy	0.81	Too sandy	0.81
					Slope	0.50
495C: Karlsborg-----	Somewhat limited		Somewhat limited		Very limited	
	Depth to saturated zone	0.98	Restricted permeability	0.98	Slope	1.00
	Restricted permeability	0.98	Too sandy	0.81	Depth to saturated zone	0.98
	Too sandy	0.81	Depth to saturated zone	0.75	Restricted permeability	0.98
	Slope	0.04	Slope	0.04	Too sandy	0.81
Grettum-----	Somewhat limited		Somewhat limited		Very limited	
	Too sandy	0.81	Too sandy	0.81	Slope	1.00
	Slope	0.04	Slope	0.04	Too sandy	0.81
Perida-----	Somewhat limited		Somewhat limited		Very limited	
	Too sandy	0.81	Too sandy	0.81	Slope	1.00
	Slope	0.04	Slope	0.04	Too sandy	0.81
495D: Karlsborg-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Depth to saturated zone	0.98	Restricted permeability	0.98	Depth to saturated zone	0.98
	Restricted permeability	0.98	Too sandy	0.81	Restricted permeability	0.98
	Too sandy	0.81	Depth to saturated zone	0.75	Too sandy	0.81
Grettum-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Too sandy	0.81	Too sandy	0.81	Too sandy	0.81
Perida-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Too sandy	0.81	Too sandy	0.81	Too sandy	0.81



Table 16a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
497A: Meenon-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	1.00	Restricted permeability	1.00	Restricted permeability	1.00
	Too sandy	0.81	Too sandy	0.81	Too sandy	0.81
					Gravel content	0.06
515A: Manitowish-----	Not limited		Not limited		Somewhat limited	
					Content of large stones	0.01
					Gravel content	0.01
521A: Dody-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Restricted permeability	0.98	Restricted permeability	0.98	Restricted permeability	0.98
524E: Rock outcrop-----	Not rated		Not rated		Not rated	
Frogcreek-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too stony	0.50	Too stony	0.50	Slope	1.00
	Restricted permeability	0.21	Restricted permeability	0.21	Too stony	0.50
					Restricted permeability	0.21
Metonga-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Too stony	0.47	Too stony	0.47	Too stony	0.47
					Depth to bedrock	0.42
					Content of large stones	0.03
542B: Haugen, very stony--	Somewhat limited		Somewhat limited		Somewhat limited	
	Restricted permeability	0.60	Restricted permeability	0.60	Restricted permeability	0.60
	Too stony	0.50	Too stony	0.50	Slope	0.50
	Depth to saturated zone	0.39	Depth to saturated zone	0.19	Too stony	0.50
					Depth to saturated zone	0.39
					Gravel content	0.05
Haugen-----	Somewhat limited		Somewhat limited		Somewhat limited	
	Restricted permeability	0.60	Restricted permeability	0.60	Restricted permeability	0.60
	Depth to saturated zone	0.39	Depth to saturated zone	0.19	Slope	0.50
					Depth to saturated zone	0.39
					Gravel content	0.05
					Content of large stones	0.03

Table 16a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
542C: Haugen, very stony--	Somewhat limited		Somewhat limited		Very limited	
	Restricted permeability	0.60	Restricted permeability	0.60	Slope	1.00
	Too stony	0.50	Too stony	0.50	Restricted permeability	0.60
	Depth to saturated zone	0.39	Depth to saturated zone	0.19	Too stony	0.50
	Slope	0.04	Slope	0.04	Depth to saturated zone	0.39
					Gravel content	0.05
Haugen-----	Somewhat limited		Somewhat limited		Very limited	
	Restricted permeability	0.60	Restricted permeability	0.60	Slope	1.00
	Depth to saturated zone	0.39	Depth to saturated zone	0.19	Restricted permeability	0.60
	Slope	0.04	Slope	0.04	Depth to saturated zone	0.39
					Gravel content	0.05
					Content of large stones	0.03
543B: Anigon-----	Not limited		Not limited		Somewhat limited	
					Slope	0.50
543C2: Anigon-----	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.04	Slope	0.04	Slope	1.00
544F: Menahga-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
Mahtomedi-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Too sandy	0.72	Too sandy	0.72	Too sandy	0.72
					Gravel content	0.04
555A: Fordum-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Ponding	1.00	Flooding	1.00
	Ponding	1.00	Flooding	0.40	Ponding	1.00
					Gravel content	0.04
574B: Sayner-----	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.87	Too sandy	0.87	Too sandy	0.87
					Slope	0.12
					Gravel content	0.02
					Content of large stones	0.01
574C: Sayner-----	Somewhat limited		Somewhat limited		Very limited	
	Too sandy	0.87	Too sandy	0.87	Slope	1.00
	Slope	0.37	Slope	0.37	Too sandy	0.87
					Gravel content	0.02
					Content of large stones	0.01

Table 16a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
574E: Sayner-----	Very limited Slope Too sandy	1.00 0.87	Very limited Slope Too sandy	1.00 0.87	Very limited Slope Too sandy Gravel content Content of large stones	1.00 0.87 0.02 0.01
579B: Parkfalls-----	Very limited Depth to saturated zone Too stony Restricted permeability	1.00 0.50 0.21	Very limited Depth to saturated zone Too stony Restricted permeability	1.00 0.50 0.21	Very limited Depth to saturated zone Too stony Restricted permeability Content of large stones	1.00 0.50 0.21 0.01
600A: Haplosaprists-----	Not rated		Not rated		Not rated	
Psammaquents-----	Not rated		Not rated		Not rated	
615B: Cress-----	Not limited		Not limited		Somewhat limited Slope	0.12
615C: Cress-----	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
615D: Cress-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
623A: Capitola-----	Very limited Depth to saturated zone Ponding Too stony	1.00 1.00 0.50	Very limited Depth to saturated zone Ponding Too stony	1.00 1.00 0.50	Very limited Depth to saturated zone Ponding Too stony	1.00 1.00 0.50
624A: Ossmer-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
632A: Aftad-----	Somewhat limited Depth to saturated zone	0.39	Somewhat limited Depth to saturated zone	0.19	Somewhat limited Depth to saturated zone	0.39
632B: Aftad-----	Somewhat limited Depth to saturated zone	0.39	Somewhat limited Depth to saturated zone	0.19	Somewhat limited Slope Depth to saturated zone	0.50 0.39

Table 16a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
632C: Aftad-----	Somewhat limited Depth to saturated zone Slope	0.39  0.04	Somewhat limited Depth to saturated zone Slope	0.19  0.04	Very limited Slope Depth to saturated zone	1.00  0.39
633F: Pence-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Content of large stones Gravel content	1.00 0.01 0.01
Padus-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.02
648B: Sconsin-----	Somewhat limited Depth to saturated zone	0.98	Somewhat limited Depth to saturated zone	0.75	Somewhat limited Depth to saturated zone Slope	0.98 0.50
670C: Keweenaw-----	Somewhat limited Slope	0.37	Somewhat limited Slope	0.37	Very limited Slope Content of large stones	1.00 0.01
Pence-----	Somewhat limited Slope	0.37	Somewhat limited Slope	0.37	Very limited Slope Content of large stones Gravel content	1.00 0.05 0.01
670E: Keweenaw-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Content of large stones	1.00 0.01
Pence-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Content of large stones Gravel content	1.00 0.05 0.01
671B: Spoonershill, stony--	Somewhat limited Depth to saturated zone Restricted permeability	0.39  0.21	Somewhat limited Restricted permeability Depth to saturated zone	0.21  0.19	Somewhat limited Slope Depth to saturated zone Restricted permeability Content of large stones Gravel content	0.50 0.39 0.21 0.05 0.02

Table 16a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
671B: Spoonershill-----	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to	0.39	Restricted	0.21	Slope	0.50
	saturated zone		permeability		Depth to	0.39
	Restricted	0.21	Depth to	0.19	saturated zone	
	permeability		saturated zone		Restricted	0.21
					permeability	
					Gravel content	0.02
					Content of large	0.01
					stones	
680B: Stanberry, stony----	Somewhat limited		Somewhat limited		Somewhat limited	
	Too stony	0.50	Too stony	0.50	Slope	0.50
	Depth to	0.39	Restricted	0.21	Too stony	0.50
	saturated zone		permeability		Depth to	0.39
	Restricted	0.21	Depth to	0.19	saturated zone	
	permeability		saturated zone		Restricted	0.21
					permeability	
					Content of large	0.01
					stones	
Pence, stony-----	Somewhat limited		Somewhat limited		Somewhat limited	
	Too stony	0.50	Too stony	0.50	Slope	0.50
					Too stony	0.50
					Content of large	0.01
					stones	
					Gravel content	0.01
683A: Tipler-----	Not limited		Not limited		Somewhat limited	
					Gravel content	0.02
706A: Winterfield-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Flooding	1.00	Flooding	0.40	Flooding	1.00
Totagatic-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Flooding	1.00	Ponding	1.00	Flooding	1.00
	Ponding	1.00	Flooding	0.40	Ponding	1.00
724A: Rib-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
Rock outcrop-----	Not rated		Not rated		Not rated	
726B: Sissabagama-----	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.81	Too sandy	0.81	Too sandy	0.81
					Slope	0.12

Table 16a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
733A: Wozny-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Too stony	0.50	Too stony	0.50	Too stony	0.50
	Restricted permeability	0.21	Restricted permeability	0.21	Restricted permeability	0.21
771A: Lenroot-----	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.72	Too sandy	0.72	Too sandy	0.72
	Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
					Gravel content	0.06
827A: Scoba-----	Somewhat limited		Somewhat limited		Somewhat limited	
	Depth to saturated zone	0.39	Depth to saturated zone	0.19	Depth to saturated zone	0.39
					Gravel content	0.04
853C: Frogcreek-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too stony	0.50	Too stony	0.50	Slope	1.00
	Restricted permeability	0.21	Restricted permeability	0.21	Too stony	0.50
					Restricted permeability	0.21
Stinnett-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too stony	0.50	Too stony	0.50	Too stony	0.50
	Restricted permeability	0.21	Restricted permeability	0.21	Restricted permeability	0.21
Wozny-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Too stony	0.50	Too stony	0.50	Too stony	0.50
	Restricted permeability	0.21	Restricted permeability	0.21	Restricted permeability	0.21
856B: Stinnett-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too stony	0.50	Too stony	0.50	Too stony	0.50
	Restricted permeability	0.21	Restricted permeability	0.21	Restricted permeability	0.21

Table 16a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
857B: Frogcreek-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too stony	0.50	Too stony	0.50	Slope	0.50
	Restricted permeability	0.21	Restricted permeability	0.21	Too stony	0.50
					Restricted permeability	0.21
857C: Frogcreek-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too stony	0.50	Too stony	0.50	Slope	1.00
	Restricted permeability	0.21	Restricted permeability	0.21	Too stony	0.50
	Slope	0.16	Slope	0.16	Restricted permeability	0.21
873B: Stanberry-----	Somewhat limited		Somewhat limited		Somewhat limited	
	Too stony	0.50	Too stony	0.50	Slope	0.50
	Depth to saturated zone	0.39	Restricted permeability	0.21	Too stony	0.50
	Restricted permeability	0.21	Depth to saturated zone	0.19	Depth to saturated zone	0.39
					Restricted permeability	0.21
					Content of large stones	0.01
873C: Stanberry-----	Somewhat limited		Somewhat limited		Very limited	
	Too stony	0.50	Too stony	0.50	Slope	1.00
	Depth to saturated zone	0.39	Slope	0.37	Too stony	0.50
	Slope	0.37	Restricted permeability	0.21	Depth to saturated zone	0.39
	Restricted permeability	0.21	Depth to saturated zone	0.19	Restricted permeability	0.21
					Content of large stones	0.01
873D: Stanberry-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Too stony	0.50	Too stony	0.50	Too stony	0.50
	Depth to saturated zone	0.39	Restricted permeability	0.21	Depth to saturated zone	0.39
	Restricted permeability	0.21	Depth to saturated zone	0.19	Restricted permeability	0.21
					Content of large stones	0.01
905A: Cublake-----	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.50	Too sandy	0.50	Too sandy	0.50
					Gravel content	0.06
926A: Flink-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too sandy	0.50	Too sandy	0.50	Too sandy	0.50

Table 16a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
943D: Stanberry-----	Very limited Slope Too stony Depth to saturated zone Restricted permeability	 1.00 0.50 0.39  0.21	Very limited Slope Too stony Restricted permeability Depth to saturated zone	 1.00 0.50 0.21  0.19	Very limited Slope Too stony Depth to saturated zone Restricted permeability Content of large stones	 1.00 0.50 0.39  0.21  0.01
Greenwood-----	Very limited Depth to saturated zone Ponding	 1.00  1.00	Very limited Depth to saturated zone Ponding	 1.00  1.00	Very limited Depth to saturated zone Ponding	 1.00  1.00
948A: Billyboy-----	Somewhat limited Depth to saturated zone	 0.98	Somewhat limited Depth to saturated zone	 0.75	Somewhat limited Depth to saturated zone	 0.98
970C: Keweenaw-----	Somewhat limited Slope	 0.37	Somewhat limited Slope	 0.37	Very limited Slope Content of large stones	 1.00  0.01
Pence-----	Somewhat limited Too stony Slope	 0.50 0.37	Somewhat limited Too stony Slope	 0.50 0.37	Very limited Slope Too stony Content of large stones Gravel content	 1.00 0.50 0.01  0.01
Greenwood-----	Not rated		Not rated		Not rated	
970E: Keweenaw-----	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope Content of large stones	 1.00  0.01
Pence-----	Very limited Slope Too stony	 1.00 0.50	Very limited Slope Too stony	 1.00 0.50	Very limited Slope Too stony Content of large stones Gravel content	 1.00 0.50 0.01  0.01
Greenwood-----	Not rated		Not rated		Not rated	
1070C: Fremstadt-----	Somewhat limited Slope	 0.16	Somewhat limited Slope	 0.16	Very limited Slope Gravel content	 1.00 0.43
Cress-----	Somewhat limited Slope	 0.04	Somewhat limited Slope	 0.04	Very limited Slope	 1.00



Table 16a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1070D: Fremstadt-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.43
Cress-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
1080B: Spoonershill-----	Somewhat limited Depth to saturated zone Restricted permeability	0.39  0.21	Somewhat limited Restricted permeability Depth to saturated zone	0.21  0.19	Somewhat limited Slope Depth to saturated zone Restricted permeability Gravel content Content of large stones	0.50 0.39 0.21 0.02 0.01
Spoonershill, stony--	Somewhat limited Depth to saturated zone Restricted permeability	0.39  0.21	Somewhat limited Restricted permeability Depth to saturated zone	0.21  0.19	Somewhat limited Slope Depth to saturated zone Restricted permeability Content of large stones Gravel content	0.50 0.39 0.21 0.05 0.02
Cress-----	Not limited		Not limited		Somewhat limited Slope	0.12
1653C: Stanberry-----	Somewhat limited Too stony Depth to saturated zone Restricted permeability Slope	0.50 0.39  0.21 0.04	Somewhat limited Too stony Restricted permeability Depth to saturated zone Slope	0.50 0.21  0.19 0.04	Very limited Slope Too stony Depth to saturated zone Restricted permeability Content of large stones	1.00 0.50 0.39 0.21 0.01
Parkfalls-----	Very limited Depth to saturated zone Too stony Restricted permeability	1.00  0.50 0.21	Very limited Depth to saturated zone Too stony Restricted permeability	1.00  0.50 0.21	Very limited Depth to saturated zone Too stony Restricted permeability Content of large stones	1.00  0.50 0.21 0.01
Wozny-----	Very limited Depth to saturated zone Ponding Too stony Restricted permeability	1.00  1.00 0.50 0.21	Very limited Depth to saturated zone Ponding Too stony Restricted permeability	1.00  1.00 0.50 0.21	Very limited Depth to saturated zone Ponding Too stony Restricted permeability	1.00  1.00 0.50 0.21

Table 16a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2015: Pits-----	Not rated		Not rated		Not rated	
2050: Landfill-----	Not rated		Not rated		Not rated	
3011A: Barronett-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Restricted	0.21	Restricted	0.21	Restricted	0.21
	permeability		permeability		permeability	
3125A: Meehan-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Too sandy	0.81	Too sandy	0.81	Too sandy	0.81
3126A: Wurtsmith-----	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.60	Too sandy	0.60	Too sandy	0.60
	Depth to	0.39	Depth to	0.19	Depth to	0.39
	saturated zone		saturated zone		saturated zone	
					Gravel content	0.06
3276A: Au Gres-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
3312B: Glendenning, very stony-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Too stony	0.50	Too stony	0.50	Too stony	0.50
	Restricted	0.21	Restricted	0.21	Restricted	0.21
	permeability		permeability		permeability	
					Gravel content	0.05
					Content of large	0.03
					stones	
Glendenning-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Restricted	0.21	Restricted	0.21	Restricted	0.21
	permeability		permeability		permeability	
					Gravel content	0.06
					Content of large	0.01
					stones	
3336A: Fenander-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Restricted	0.21	Restricted	0.21	Restricted	0.21
	permeability		permeability		permeability	

Table 16a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3403A: Loxley-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Content of organic matter	1.00	Content of organic matter	1.00	Content of organic matter	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
Beseman-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Content of organic matter	1.00	Content of organic matter	1.00	Content of organic matter	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Restricted permeability	0.21	Restricted permeability	0.21	Restricted permeability	0.21
Dawson-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
3424C: Frogcreek-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too stony	0.50	Too stony	0.50	Slope	1.00
	Restricted permeability	0.21	Restricted permeability	0.21	Too stony	0.50
					Restricted permeability	0.21
Magroc-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too stony	0.50	Too stony	0.50	Too stony	0.50
					Content of large stones	0.03
					Gravel content	0.02
Stinnett-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too stony	0.50	Too stony	0.50	Too stony	0.50
	Restricted permeability	0.21	Restricted permeability	0.21	Restricted permeability	0.21
Rock outcrop-----	Not rated		Not rated		Not rated	
3446A: Newson-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
3448B: Grettum-----	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.81	Too sandy	0.81	Too sandy	0.81
					Slope	0.12

Table 16a.--Recreational Development--Continued

Map symbol and soil name	Camp areas		Picnic areas		Playgrounds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3448C: Grettum-----	Somewhat limited		Somewhat limited		Very limited	
	Too sandy	0.81	Too sandy	0.81	Slope	1.00
	Slope	0.04	Slope	0.04	Too sandy	0.81
3516A: Slimlake-----	Not limited		Not limited		Not limited	
3629B: Perida-----	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.81	Too sandy	0.81	Too sandy	0.81
M-W: Miscellaneous water	Not rated		Not rated		Not rated	
W: Water-----	Not rated		Not rated		Not rated	

Table 16b.--Recreational Development

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. "Not rated" indicates that data are not available or that no rating is applicable. See text for further explanation of ratings in this table)

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3A:						
Totagatic-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Flooding	1.00
	saturated zone		saturated zone		Depth to	1.00
	Ponding	1.00	Ponding	1.00	saturated zone	
	Flooding	0.40	Flooding	0.40	Ponding	1.00
Bowstring-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Flooding	1.00
	saturated zone		saturated zone		Content of	1.00
	Content of	1.00	Content of	1.00	organic matter	
	organic matter		organic matter		Depth to	1.00
	Ponding	1.00	Ponding	1.00	saturated zone	
	Flooding	0.40	Flooding	0.40	Ponding	1.00
Ausable-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Flooding	1.00
	saturated zone		saturated zone		Depth to	1.00
	Ponding	1.00	Ponding	1.00	saturated zone	
	Flooding	0.40	Flooding	0.40	Ponding	1.00
22A:						
Comstock-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
24A:						
Poskin-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
27A:						
Scott Lake-----	Not limited		Not limited		Somewhat limited	
					Droughty	0.01
28B:						
Haugen, very stony--	Somewhat limited		Somewhat limited		Somewhat limited	
	Too stony	0.50	Too stony	0.50	Depth to	0.19
					saturated zone	
					Content of large	0.03
					stones	
Haugen-----	Not limited		Not limited		Somewhat limited	
					Depth to	0.19
					saturated zone	
					Content of large	0.03
					stones	
Rosholt, very stony	Somewhat limited		Somewhat limited		Somewhat limited	
	Too stony	0.50	Too stony	0.50	Droughty	0.02
					Content of large	0.01
					stones	

Table 16b.--Recreational Development--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
28B: Rosholt-----	Not limited		Not limited		Somewhat limited Droughty	0.01
28C: Haugen, very stony--	Somewhat limited Too stony	0.50	Somewhat limited Too stony	0.50	Somewhat limited Depth to saturated zone Slope Content of large stones	0.19 0.04 0.03
Haugen-----	Not limited		Not limited		Somewhat limited Depth to saturated zone Slope Content of large stones	0.19 0.04 0.03
Rosholt, very stony	Somewhat limited Too stony	0.50	Somewhat limited Too stony	0.50	Somewhat limited Slope Droughty Content of large stones	0.04 0.02 0.01
Rosholt-----	Not limited		Not limited		Somewhat limited Slope Droughty	0.04 0.01
33B: Chetek-----	Not limited		Not limited		Somewhat limited Droughty Content of large stones	0.61 0.01
33C: Chetek-----	Not limited		Not limited		Somewhat limited Droughty Slope Content of large stones	0.61 0.04 0.01
38A: Rosholt-----	Not limited		Not limited		Somewhat limited Droughty	0.01
38B: Rosholt-----	Not limited		Not limited		Somewhat limited Droughty	0.01
38C: Rosholt-----	Not limited		Not limited		Somewhat limited Slope Droughty	0.04 0.01
38D: Rosholt-----	Somewhat limited Slope	0.02	Not limited		Very limited Slope Droughty	1.00 0.01

Table 16b.--Recreational Development--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
42D: Amery-----	Somewhat limited Too stony Slope	0.50 0.02	Somewhat limited Too stony	0.50	Very limited Slope Content of large stones	1.00 0.03
43B: Antigo-----	Not limited		Not limited		Not limited	
43C: Antigo-----	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Somewhat limited Slope	0.37
43D: Antigo-----	Very limited Water erosion Slope	1.00 0.92	Very limited Water erosion	1.00	Very limited Slope	1.00
48A: Brill-----	Somewhat limited Depth to saturated zone	0.44	Somewhat limited Depth to saturated zone	0.44	Somewhat limited Depth to saturated zone	0.75
63A: Crystal Lake-----	Not limited		Not limited		Somewhat limited Depth to saturated zone	0.19
63B: Crystal Lake-----	Not limited		Not limited		Somewhat limited Depth to saturated zone	0.19
63C: Crystal Lake-----	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Somewhat limited Depth to saturated zone Slope	0.19 0.04
63E: Crystal Lake-----	Very limited Water erosion Slope	1.00 1.00	Very limited Water erosion Slope	1.00 0.08	Very limited Slope	1.00
64A: Totagatic-----	Very limited Depth to saturated zone Ponding Flooding	1.00 1.00 0.40	Very limited Depth to saturated zone Ponding Flooding	1.00 1.00 0.40	Very limited Flooding Depth to saturated zone Ponding	1.00 1.00 1.00
Winterfield-----	Very limited Depth to saturated zone Too sandy Flooding	1.00 0.79 0.40	Very limited Depth to saturated zone Too sandy Flooding	1.00 0.79 0.40	Very limited Flooding Depth to saturated zone Droughty	1.00 1.00 0.50

Table 16b.--Recreational Development--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
69B:						
Keweenaw-----	Somewhat limited Too sandy	0.76	Somewhat limited Too sandy	0.76	Somewhat limited Droughty Content of large stones	0.06 0.01
Sayner-----	Somewhat limited Too sandy	0.87	Somewhat limited Too sandy	0.87	Somewhat limited Droughty Content of large stones	0.94 0.05
Vilas-----	Somewhat limited Too sandy	0.87	Somewhat limited Too sandy	0.87	Somewhat limited Droughty	0.42
69C:						
Keweenaw-----	Somewhat limited Too sandy	0.76	Somewhat limited Too sandy	0.76	Somewhat limited Slope Droughty Content of large stones	0.16 0.06 0.01
Sayner-----	Somewhat limited Too sandy	0.87	Somewhat limited Too sandy	0.87	Somewhat limited Droughty Slope Content of large stones	0.94 0.16 0.05
Vilas-----	Somewhat limited Too sandy	0.87	Somewhat limited Too sandy	0.87	Somewhat limited Droughty Slope	0.42 0.16
69E:						
Keweenaw-----	Very limited Slope Too sandy	1.00 0.76	Somewhat limited Too sandy Slope	0.76 0.22	Very limited Slope Droughty Content of large stones	1.00 0.06 0.01
Sayner-----	Very limited Slope Too sandy	1.00 0.87	Somewhat limited Too sandy Slope	0.87 0.22	Very limited Slope Droughty Content of large stones	1.00 0.94 0.05
Vilas-----	Very limited Slope Too sandy	1.00 0.87	Somewhat limited Too sandy Slope	0.87 0.22	Very limited Slope Droughty	1.00 0.42
74B:						
Vilas-----	Somewhat limited Too sandy	0.87	Somewhat limited Too sandy	0.87	Somewhat limited Droughty	0.42
74C:						
Vilas-----	Somewhat limited Too sandy	0.87	Somewhat limited Too sandy	0.87	Somewhat limited Droughty Slope	0.42 0.37
74D:						
Vilas-----	Somewhat limited Slope Too sandy	0.92 0.87	Somewhat limited Too sandy	0.87	Very limited Slope Droughty	1.00 0.42



Table 16b.--Recreational Development--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
100B: Menahga-----	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Somewhat limited Droughty Too sandy	0.93 0.50
100C: Menahga-----	Not limited		Not limited		Somewhat limited Droughty Slope	0.51 0.04
100D: Menahga-----	Somewhat limited Slope	0.68	Not limited		Very limited Slope Droughty	1.00 0.51
127D: Amery-----	Somewhat limited Too stony Slope	0.50 0.02	Somewhat limited Too stony	0.50	Very limited Slope Content of large stones	1.00 0.03
Rosholt-----	Somewhat limited Too stony Slope	0.50 0.02	Somewhat limited Too stony	0.50	Very limited Slope Droughty Content of large stones	1.00 0.02 0.01
127E: Amery-----	Very limited Slope Too stony	1.00 0.50	Somewhat limited Slope Too stony	0.56 0.50	Very limited Slope Content of large stones	1.00 0.03
Rosholt-----	Very limited Slope Too stony	1.00 0.50	Somewhat limited Slope Too stony	0.56 0.50	Very limited Slope Droughty Content of large stones	1.00 0.02 0.01
156B: Magnor, very stony--	Very limited Depth to saturated zone Too stony	1.00 0.50	Very limited Depth to saturated zone Too stony	1.00 0.50	Very limited Depth to saturated zone Content of large stones	1.00 0.01
Magnor-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
157B: Freeon, very stony--	Very limited Depth to saturated zone Too stony	1.00 0.50	Very limited Depth to saturated zone Too stony	1.00 0.50	Very limited Depth to saturated zone	1.00
Freeon-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Content of large stones	1.00 0.01

Table 16b.--Recreational Development--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
157C: Freeon, very stony--	Very limited Depth to saturated zone Water erosion Too stony	1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Water erosion Too stony	1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Slope	1.00 0.04
Freeon-----	Very limited Depth to saturated zone Water erosion	1.00 1.00 1.00	Very limited Depth to saturated zone Water erosion	1.00 1.00 1.00	Very limited Depth to saturated zone Slope Content of large stones	1.00 0.04 0.01
160A: Oesterle-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
182B: Padus-----	Not limited		Not limited		Not limited	
182C: Padus-----	Not limited		Not limited		Somewhat limited Slope	0.37
192A: Worcester-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
193A: Minocqua-----	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
215B: Pence-----	Not limited		Not limited		Somewhat limited Droughty Content of large stones	0.30 0.01
215C: Pence-----	Not limited		Not limited		Somewhat limited Slope Droughty Content of large stones	0.37 0.30 0.01
215D: Pence-----	Somewhat limited Slope	0.92	Not limited		Very limited Slope Droughty Content of large stones	1.00 0.30 0.01

Table 16b.--Recreational Development--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
315A: Rib-----	Very limited Depth to saturated zone Ponding	1.00  1.00	Very limited Depth to saturated zone Ponding	1.00  1.00	Very limited Depth to saturated zone Ponding	1.00  1.00
337A: Plover-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
368B: Mahtomedi-----	Somewhat limited Too sandy	0.72	Somewhat limited Too sandy	0.72	Very limited Droughty	1.00
Cress-----	Not limited		Not limited		Somewhat limited Droughty	0.13
368C: Mahtomedi-----	Somewhat limited Too sandy	0.72	Somewhat limited Too sandy	0.72	Very limited Droughty Slope	1.00 0.04
Cress-----	Not limited		Not limited		Somewhat limited Droughty Slope	0.13 0.04
368D: Mahtomedi-----	Somewhat limited Too sandy Slope	0.72 0.50	Somewhat limited Too sandy	0.72	Very limited Slope Droughty	1.00 1.00
Cress-----	Somewhat limited Slope	0.50	Not limited		Very limited Slope Droughty	1.00 0.13
371A: Croswell-----	Somewhat limited Too sandy	0.87	Somewhat limited Too sandy	0.87	Somewhat limited Droughty Depth to saturated zone	0.54 0.19
380B: Cress-----	Not limited		Not limited		Somewhat limited Droughty	0.13
Rosholt-----	Not limited		Not limited		Somewhat limited Droughty	0.01
380C: Cress-----	Not limited		Not limited		Somewhat limited Droughty Slope	0.13 0.04
Rosholt-----	Not limited		Not limited		Somewhat limited Slope Droughty	0.04 0.01

Table 16b.--Recreational Development--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
380D:						
Cress-----	Somewhat limited Slope	0.68	Not limited		Very limited Slope Droughty	1.00 0.13
Rosholt-----	Somewhat limited Slope	0.68	Not limited		Very limited Slope Droughty	1.00 0.01
383B:						
Mahtomedi-----	Somewhat limited Too sandy	0.72	Somewhat limited Too sandy	0.72	Very limited Droughty	1.00
383C:						
Mahtomedi-----	Somewhat limited Too sandy	0.72	Somewhat limited Too sandy	0.72	Very limited Droughty Slope	1.00 0.04
383D:						
Mahtomedi-----	Somewhat limited Too sandy Slope	0.72 0.68	Somewhat limited Too sandy	0.72	Very limited Slope Droughty	1.00 1.00
396B:						
Friendship-----	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Somewhat limited Droughty Too sandy	0.91 0.50
Wurtsmith-----	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Somewhat limited Droughty Too sandy Depth to saturated zone	0.87 0.50 0.19
Grayling-----	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Droughty Too sandy	1.00 0.50
397A:						
Perchlake-----	Very limited Depth to saturated zone Too sandy	1.00 0.96	Very limited Depth to saturated zone Too sandy	1.00 0.96	Very limited Depth to saturated zone Droughty	1.00 0.36
399B:						
Grayling-----	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Droughty Too sandy	1.00 0.50
399C:						
Grayling-----	Very limited Too sandy	1.00	Very limited Too sandy	1.00	Very limited Droughty Too sandy Slope	1.00 0.50 0.04
399D:						
Grayling-----	Very limited Too sandy Slope	1.00 0.68	Very limited Too sandy	1.00	Very limited Droughty Slope Too sandy	1.00 1.00 0.50

Table 16b.--Recreational Development--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
405A:						
Lupton-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Content of	1.00
	saturated zone		saturated zone		organic matter	
	Content of	1.00	Content of	1.00	Depth to	1.00
	organic matter		organic matter		saturated zone	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
Cathro-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Content of	1.00
	saturated zone		saturated zone		organic matter	
	Content of	1.00	Content of	1.00	Depth to	1.00
	organic matter		organic matter		saturated zone	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
Tawas-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Content of	1.00
	saturated zone		saturated zone		organic matter	
	Content of	1.00	Content of	1.00	Depth to	1.00
	organic matter		organic matter		saturated zone	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
406A:						
Loxley-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Content of	1.00
	saturated zone		saturated zone		organic matter	
	Content of	1.00	Content of	1.00	Depth to	1.00
	organic matter		organic matter		saturated zone	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
407A:						
Seelyeville-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Content of	1.00
	saturated zone		saturated zone		organic matter	
	Content of	1.00	Content of	1.00	Depth to	1.00
	organic matter		organic matter		saturated zone	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
Markey-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Content of	1.00
	saturated zone		saturated zone		organic matter	
	Content of	1.00	Content of	1.00	Depth to	1.00
	organic matter		organic matter		saturated zone	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
410A:						
Seelyeville-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Content of	1.00
	saturated zone		saturated zone		organic matter	
	Content of	1.00	Content of	1.00	Depth to	1.00
	organic matter		organic matter		saturated zone	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
Cathro-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Content of	1.00
	saturated zone		saturated zone		organic matter	
	Content of	1.00	Content of	1.00	Depth to	1.00
	organic matter		organic matter		saturated zone	
	Ponding	1.00	Ponding	1.00	Ponding	1.00

Table 16b.--Recreational Development--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
412A:						
Rifle-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
Tacoosh-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
415A:						
Greenwood-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Content of	1.00
	saturated zone		saturated zone		organic matter	
	Content of	1.00	Content of	1.00	Depth to	1.00
	organic matter		organic matter		saturated zone	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
439B:						
Graycalm-----	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.30	Too sandy	0.30	Droughty	0.29
Menahga-----	Not limited		Not limited		Somewhat limited	
					Droughty	0.49
439C:						
Graycalm-----	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.30	Too sandy	0.30	Droughty	0.29
					Slope	0.04
Menahga-----	Not limited		Not limited		Somewhat limited	
					Droughty	0.49
					Slope	0.04
439D:						
Graycalm-----	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.68	Too sandy	0.30	Slope	1.00
	Too sandy	0.30			Droughty	0.29
Menahga-----	Somewhat limited		Not limited		Very limited	
	Slope	0.68			Slope	1.00
					Droughty	0.49
441C:						
Freeon-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Water erosion	1.00	Water erosion	1.00	Slope	0.37
	Too stony	0.50	Too stony	0.50		
Cathro-----	Not rated		Not rated		Not rated	
442C:						
Haugen-----	Somewhat limited		Somewhat limited		Somewhat limited	
	Too stony	0.50	Too stony	0.50	Depth to	0.19
					saturated zone	
					Content of large	0.03
					stones	

Table 16b.--Recreational Development--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
442C: Greenwood-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
443D: Amery-----	Very limited		Somewhat limited		Very limited	
	Slope	1.00	Too stony	0.50	Slope	1.00
	Too stony	0.50			Content of large stones	0.03
Greenwood-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
461A: Bowstring-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
	Content of organic matter	1.00	Content of organic matter	1.00	Content of organic matter	1.00
	Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00
	Flooding	0.40	Flooding	0.40	Ponding	1.00
484A: Greenwood-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
Beseman-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Content of organic matter	1.00
	Content of organic matter	1.00	Content of organic matter	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
495B: Karlsborg-----	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.81	Too sandy	0.81	Depth to	0.75
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	saturated zone	
					Droughty	0.26
Grettum-----	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.81	Too sandy	0.81	Droughty	0.61
Perida-----	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.81	Too sandy	0.81	Droughty	0.44
495C: Karlsborg-----	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.81	Too sandy	0.81	Depth to	0.75
	Depth to saturated zone	0.44	Depth to saturated zone	0.44	saturated zone	
					Droughty	0.26
					Slope	0.04

Table 16b.--Recreational Development--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
495C:						
Grettum-----	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.81	Too sandy	0.81	Droughty	0.61
					Slope	0.04
Perida-----	Somewhat limited		Somewhat limited		Somewhat limited	
	Too sandy	0.81	Too sandy	0.81	Droughty	0.44
					Slope	0.04
495D:						
Karlsborg-----	Somewhat limited		Somewhat limited		Very limited	
	Too sandy	0.81	Too sandy	0.81	Slope	1.00
	Slope	0.68	Depth to	0.44	Depth to	0.75
	Depth to	0.44	saturated zone		saturated zone	
	saturated zone				Droughty	0.26
Grettum-----	Somewhat limited		Somewhat limited		Very limited	
	Too sandy	0.81	Too sandy	0.81	Slope	1.00
	Slope	0.68			Droughty	0.61
Perida-----	Somewhat limited		Somewhat limited		Very limited	
	Too sandy	0.81	Too sandy	0.81	Slope	1.00
	Slope	0.68			Droughty	0.44
497A:						
Meenon-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Too sandy	0.81	Too sandy	0.81	Droughty	0.41
515A:						
Manitowish-----	Not limited		Not limited		Somewhat limited	
					Droughty	0.17
					Content of large	0.01
					stones	
521A:						
Dody-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
524E:						
Rock outcrop-----	Not rated		Not rated		Not rated	
Frogcreek-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Too stony	0.50	Too stony	0.50		
Metonga-----	Very limited		Very limited		Very limited	
	Water erosion	1.00	Water erosion	1.00	Slope	1.00
	Slope	1.00	Slope	0.56	Depth to bedrock	0.42
	Too stony	0.47	Too stony	0.47	Content of large	0.03
					stones	



Table 16b.--Recreational Development--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
542B: Haugen, very stony--	Somewhat limited Too stony	0.50	Somewhat limited Too stony	0.50	Somewhat limited Depth to saturated zone Content of large stones	0.19  0.03
Haugen-----	Not limited		Not limited		Somewhat limited Depth to saturated zone Content of large stones	0.19  0.03
542C: Haugen, very stony--	Somewhat limited Too stony	0.50	Somewhat limited Too stony	0.50	Somewhat limited Depth to saturated zone Slope Content of large stones	0.19  0.04 0.03
Haugen-----	Not limited		Not limited		Somewhat limited Depth to saturated zone Slope Content of large stones	0.19  0.04 0.03
543B: Anigon-----	Not limited		Not limited		Not limited	
543C2: Anigon-----	Very limited Water erosion	1.00	Very limited Water erosion	1.00	Somewhat limited Slope	0.04
544F: Menahga-----	Very limited Slope	1.00	Somewhat limited Slope	0.96	Very limited Slope Droughty	1.00 0.51
Mahtomedi-----	Very limited Slope Too sandy	1.00 0.72	Somewhat limited Slope Too sandy	0.96 0.72	Very limited Slope Droughty	1.00 1.00
555A: Fordum-----	Very limited Depth to saturated zone Ponding Flooding	1.00 1.00 0.40	Very limited Depth to saturated zone Ponding Flooding	1.00 1.00 0.40	Very limited Flooding Depth to saturated zone Ponding	1.00 1.00 1.00
574B: Sayner-----	Somewhat limited Too sandy	0.87	Somewhat limited Too sandy	0.87	Somewhat limited Droughty Content of large stones	0.94 0.01

Table 16b.--Recreational Development--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
574C: Sayner-----	Somewhat limited Too sandy	0.87	Somewhat limited Too sandy	0.87	Somewhat limited Droughty Slope Content of large stones	0.94 0.37 0.01
574E: Sayner-----	Very limited Slope Too sandy	1.00 0.87	Somewhat limited Too sandy Slope	0.87 0.22	Very limited Slope Droughty Content of large stones	1.00 0.94 0.01
579B: Parkfalls-----	Very limited Depth to saturated zone Too stony	1.00 0.50	Very limited Depth to saturated zone Too stony	1.00 0.50	Very limited Depth to saturated zone Content of large stones	1.00 0.01
600A: Haplosaprists-----	Not rated		Not rated		Not rated	
Psammaquents-----	Not rated		Not rated		Not rated	
615B: Cress-----	Not limited		Not limited		Somewhat limited Droughty	0.13
615C: Cress-----	Not limited		Not limited		Somewhat limited Droughty Slope	0.13 0.04
615D: Cress-----	Somewhat limited Slope	0.68	Not limited		Very limited Slope Droughty	1.00 0.13
623A: Capitola-----	Very limited Depth to saturated zone Ponding Too stony	1.00 1.00 0.50	Very limited Depth to saturated zone Ponding Too stony	1.00 1.00 0.50	Very limited Depth to saturated zone Ponding	1.00 1.00
624A: Ossmer-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
632A: Aftad-----	Not limited		Not limited		Somewhat limited Depth to saturated zone	0.19
632B: Aftad-----	Not limited		Not limited		Somewhat limited Depth to saturated zone	0.19

Table 16b.--Recreational Development--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
632C: Aftad-----	Not limited		Not limited		Somewhat limited Depth to saturated zone Slope	0.19 0.04
633F: Pence-----	Very limited Slope	1.00	Somewhat limited Slope	0.96	Very limited Slope Droughty Content of large stones	1.00 0.30 0.01
Padus-----	Very limited Slope	1.00	Somewhat limited Slope	0.96	Very limited Slope	1.00
648B: Sconsin-----	Somewhat limited Depth to saturated zone	0.44	Somewhat limited Depth to saturated zone	0.44	Somewhat limited Depth to saturated zone	0.75
670C: Keweenaw-----	Not limited		Not limited		Somewhat limited Slope Droughty Content of large stones	0.37 0.05 0.01
Pence-----	Not limited		Not limited		Somewhat limited Slope Droughty Content of large stones	0.37 0.30 0.05
670E: Keweenaw-----	Very limited Slope	1.00	Somewhat limited Slope	0.22	Very limited Slope Droughty Content of large stones	1.00 0.05 0.01
Pence-----	Very limited Slope	1.00	Somewhat limited Slope	0.22	Very limited Slope Droughty Content of large stones	1.00 0.30 0.05
671B: Spoonerhill, stony--	Not limited		Not limited		Somewhat limited Droughty Depth to saturated zone Content of large stones	0.42 0.19 0.05
Spoonerhill-----	Not limited		Not limited		Somewhat limited Droughty Depth to saturated zone Content of large stones	0.42 0.19 0.01

Table 16b.--Recreational Development--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
680B: Stanberry, stony----	Somewhat limited Too stony	0.50	Somewhat limited Too stony	0.50	Somewhat limited Depth to saturated zone Content of large stones	0.19 0.01
Pence, stony-----	Somewhat limited Too stony	0.50	Somewhat limited Too stony	0.50	Somewhat limited Droughty Content of large stones	0.30 0.01
683A: Tipler-----	Not limited		Not limited		Not limited	
706A: Winterfield-----	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Depth to saturated zone Flooding	1.00 0.40	Very limited Flooding Depth to saturated zone Droughty	1.00 1.00 0.10
Totagatic-----	Very limited Depth to saturated zone Ponding Flooding	1.00 1.00 0.40	Very limited Depth to saturated zone Ponding Flooding	1.00 1.00 0.40	Very limited Flooding Depth to saturated zone Ponding Droughty	1.00 1.00 1.00 0.37
724A: Rib-----	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Rock outcrop-----	Not rated		Not rated		Not rated	
726B: Sissabagama-----	Somewhat limited Too sandy	0.81	Somewhat limited Too sandy	0.81	Somewhat limited Droughty	0.42
733A: Wozny-----	Very limited Depth to saturated zone Ponding Too stony	1.00 1.00 0.50	Very limited Depth to saturated zone Ponding Too stony	1.00 1.00 0.50	Very limited Depth to saturated zone Ponding	1.00 1.00
771A: Lenroot-----	Somewhat limited Too sandy	0.72	Somewhat limited Too sandy	0.72	Somewhat limited Droughty Depth to saturated zone	0.99 0.19
827A: Scoba-----	Not limited		Not limited		Somewhat limited Depth to saturated zone	0.19

Table 16b.--Recreational Development--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
853C: Frogcreek-----	Very limited Depth to saturated zone Too stony	1.00  0.50	Very limited Depth to saturated zone Too stony	1.00  0.50	Very limited Depth to saturated zone	1.00
Stinnett-----	Very limited Depth to saturated zone Too stony	1.00  0.50	Very limited Depth to saturated zone Too stony	1.00  0.50	Very limited Depth to saturated zone	1.00
Wozny-----	Very limited Depth to saturated zone Ponding Too stony	1.00  1.00 0.50	Very limited Depth to saturated zone Ponding Too stony	1.00  1.00 0.50	Very limited Depth to saturated zone Ponding	1.00  1.00
856B: Stinnett-----	Very limited Depth to saturated zone Too stony	1.00  0.50	Very limited Depth to saturated zone Too stony	1.00  0.50	Very limited Depth to saturated zone	1.00
857B: Frogcreek-----	Very limited Depth to saturated zone Too stony	1.00  0.50	Very limited Depth to saturated zone Too stony	1.00  0.50	Very limited Depth to saturated zone	1.00
857C: Frogcreek-----	Very limited Depth to saturated zone Water erosion Too stony	1.00  1.00 0.50	Very limited Depth to saturated zone Water erosion Too stony	1.00  1.00 0.50	Very limited Depth to saturated zone Slope	1.00  0.16
873B: Stanberry-----	Somewhat limited Too stony	0.50	Somewhat limited Too stony	0.50	Somewhat limited Depth to saturated zone Content of large stones	0.19  0.01
873C: Stanberry-----	Somewhat limited Too stony	0.50	Somewhat limited Too stony	0.50	Somewhat limited Slope Depth to saturated zone Content of large stones	0.37  0.19  0.01
873D: Stanberry-----	Somewhat limited Slope Too stony	0.92  0.50	Somewhat limited Too stony	0.50	Very limited Slope Depth to saturated zone Content of large stones	1.00  0.19  0.01

Table 16b.--Recreational Development--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
905A: Cublake-----	Somewhat limited Too sandy	0.50	Somewhat limited Too sandy	0.50	Somewhat limited Droughty	0.61
926A: Flink-----	Very limited Depth to saturated zone Too sandy	1.00 0.50	Very limited Depth to saturated zone Too sandy	1.00 0.50	Very limited Depth to saturated zone Droughty	1.00 0.64
943D: Stanberry-----	Somewhat limited Too stony Slope	0.50 0.18	Somewhat limited Too stony	0.50	Very limited Slope Depth to saturated zone Content of large stones	1.00 0.19 0.01
Greenwood-----	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
948A: Billyboy-----	Somewhat limited Depth to saturated zone	0.44	Somewhat limited Depth to saturated zone	0.44	Somewhat limited Depth to saturated zone	0.75
970C: Keweenaw-----	Not limited		Not limited		Somewhat limited Slope Droughty Content of large stones	0.37 0.05 0.01
Pence-----	Somewhat limited Too stony	0.50	Somewhat limited Too stony	0.50	Somewhat limited Slope Droughty Content of large stones	0.37 0.30 0.01
Greenwood-----	Not rated		Not rated		Not rated	
970E: Keweenaw-----	Very limited Slope	1.00	Somewhat limited Slope	0.22	Very limited Slope Droughty Content of large stones	1.00 0.05 0.01
Pence-----	Very limited Slope Too stony	1.00 0.50	Somewhat limited Too stony Slope	0.50 0.22	Very limited Slope Droughty Content of large stones	1.00 0.30 0.01
Greenwood-----	Not rated		Not rated		Not rated	

Table 16b.--Recreational Development--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1070C:						
Fremstadt-----	Not limited		Not limited		Somewhat limited Slope	0.16
					Droughty	0.01
Cress-----	Not limited		Not limited		Somewhat limited Droughty	0.13
					Slope	0.04
1070D:						
Fremstadt-----	Somewhat limited Slope	0.92	Not limited		Very limited Slope	1.00
					Droughty	0.01
Cress-----	Somewhat limited Slope	0.68	Not limited		Very limited Slope	1.00
					Droughty	0.13
1080B:						
Spoonerhill-----	Not limited		Not limited		Somewhat limited Droughty	0.42
					Depth to saturated zone	0.19
					Content of large stones	0.01
Spoonerhill, stony--	Not limited		Not limited		Somewhat limited Droughty	0.42
					Depth to saturated zone	0.19
					Content of large stones	0.05
Cress-----	Not limited		Not limited		Somewhat limited Droughty	0.13
1653C:						
Stanberry-----	Somewhat limited Too stony	0.50	Somewhat limited Too stony	0.50	Somewhat limited Depth to saturated zone	0.19
					Slope	0.04
					Content of large stones	0.01
Parkfalls-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
	Too stony	0.50	Too stony	0.50	Content of large stones	0.01
Wozny-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Too stony	0.50	Too stony	0.50		
2015:						
Pits-----	Not rated		Not rated		Not rated	

Table 16b.--Recreational Development--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2050: Landfill-----	Not rated		Not rated		Not rated	
3011A: Barronett-----	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
3125A: Meehan-----	Very limited Depth to saturated zone Too sandy	1.00 0.81	Very limited Depth to saturated zone Too sandy	1.00 0.81	Very limited Depth to saturated zone Droughty	1.00 0.88
3126A: Wurtsmith-----	Somewhat limited Too sandy	0.60	Somewhat limited Too sandy	0.60	Somewhat limited Droughty Depth to saturated zone	0.83 0.19
3276A: Au Gres-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Droughty	1.00 0.09
3312B: Glendenning, very stony-----	Very limited Depth to saturated zone Too stony	1.00 0.50	Very limited Depth to saturated zone Too stony	1.00 0.50	Very limited Depth to saturated zone Content of large stones	1.00 0.03
Glendenning-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Content of large stones	1.00 0.01
3336A: Fenander-----	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
3403A: Loxley-----	Very limited Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00
Beseman-----	Very limited Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00



Table 16b.--Recreational Development--Continued

Map symbol and soil name	Paths and trails		Off-road motorcycle trails		Golf fairways	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3403A: Dawson-----	Very limited Depth to saturated zone Ponding	1.00  1.00	Very limited Depth to saturated zone Ponding	1.00  1.00	Very limited Depth to saturated zone Ponding	1.00  1.00
3424C: Frogcreek-----	Very limited Depth to saturated zone Too stony	1.00  0.50	Very limited Depth to saturated zone Too stony	1.00  0.50	Very limited Depth to saturated zone	1.00
Magroc-----	Very limited Depth to saturated zone Too stony	1.00  0.50	Very limited Depth to saturated zone Too stony	1.00  0.50	Very limited Depth to saturated zone Content of large stones	1.00  0.03
Stinnett-----	Very limited Depth to saturated zone Too stony	1.00  0.50	Very limited Depth to saturated zone Too stony	1.00  0.50	Very limited Depth to saturated zone	1.00
Rock outcrop-----	Not rated		Not rated		Not rated	
3446A: Newson-----	Very limited Depth to saturated zone Ponding	1.00  1.00	Very limited Depth to saturated zone Ponding	1.00  1.00	Very limited Depth to saturated zone Ponding	1.00  1.00
3448B: Grettum-----	Somewhat limited Too sandy	0.81	Somewhat limited Too sandy	0.81	Somewhat limited Droughty	0.61
3448C: Grettum-----	Somewhat limited Too sandy	0.81	Somewhat limited Too sandy	0.81	Somewhat limited Droughty Slope	0.61 0.04
3516A: Slimlake-----	Not limited		Not limited		Somewhat limited Droughty	0.21
3629B: Perida-----	Somewhat limited Too sandy	0.81	Somewhat limited Too sandy	0.81	Somewhat limited Droughty	0.44
M-W: Miscellaneous water	Not rated		Not rated		Not rated	
W: Water-----	Not rated		Not rated		Not rated	

Table 17.--Wildlife Habitat

(See text for definitions of terms used in this table. Absence of an entry indicates that no rating is applicable)

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life
3A:										
Totagatic-----	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
Bowstring-----	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
Ausable-----	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
22A:										
Comstock-----	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
24A:										
Poskin-----	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
27A:										
Scott Lake-----	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
28B:										
Haugen, very stony-----	Very poor	Poor	Good	Good	Good	Poor	Very poor	Poor	Good	Very poor
Haugen-----	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
Rosholt, very stony-----	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
Rosholt-----	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
28C:										
Haugen, very stony-----	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Haugen-----	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
Rosholt, very stony-----	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
Rosholt-----	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
33B:										
Chetek-----	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
33C:										
Chetek-----	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
38A:										
Rosholt-----	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
38B:										
Rosholt-----	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor

Table 17.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life
38C: Rosholt-----	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
38D: Rosholt-----	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
42D: Amery-----	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
43B: Antigo-----	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
43C: Antigo-----	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
43D: Antigo-----	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
48A: Brill-----	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
63A: Crystal Lake-----	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
63B: Crystal Lake-----	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
63C: Crystal Lake-----	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
63E: Crystal Lake-----	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
64A: Totagatic-----	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
Winterfield-----	Poor	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair
69B: Keweenaw-----	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Sayner-----	Poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
Vilas-----	Very poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
69C: Keweenaw-----	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor

Table 17.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life
69C:										
Sayner-----	Poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
Vilas-----	Very poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
69E:										
Keweenaw-----	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Sayner-----	Very poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
Vilas-----	Very poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
74B:										
Vilas-----	Poor	Fair	Fair	Poor	Poor	Very poor	Very poor	Fair	Poor	Very poor
74C:										
Vilas-----	Poor	Fair	Fair	Poor	Poor	Very poor	Very poor	Fair	Poor	Very poor
74D:										
Vilas-----	Very poor	Poor	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
100B:										
Menahga-----	Poor	Poor	Fair	Poor	Fair	Very poor	Very poor	Poor	Fair	Very poor
100C:										
Menahga-----	Poor	Poor	Fair	Poor	Fair	Very poor	Very poor	Poor	Fair	Very poor
100D:										
Menahga-----	Very poor	Poor	Fair	Poor	Fair	Very poor	Very poor	Poor	Fair	Very poor
127D:										
Amery-----	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Rosholt-----	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
127E:										
Amery-----	Very poor	Very poor	Good	Good	Good	Very poor	Very poor	Poor	Fair	Very poor
Rosholt-----	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
156B:										
Magnor, very stony-----	Very poor	Poor	Good	Good	Good	Poor	Poor	Poor	Good	Poor
Magnor-----	Fair	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor

Table 17.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life
157B:										
Freeon, very stony-----	Very poor	Poor	Good	Good	Good	Poor	Poor	Poor	Good	Poor
Freeon-----	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
157C:										
Freeon, very stony-----	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Freeon-----	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
160A:										
Oesterle-----	Fair	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
182B:										
Padus-----	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
182C:										
Padus-----	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
192A:										
Worcester-----	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
193A:										
Minocqua-----	Very poor	Fair	Fair	Fair	Fair	Good	Good	Poor	Fair	Good
215B:										
Pence-----	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
215C:										
Pence-----	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
215D:										
Pence-----	Poor	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
315A:										
Rib-----	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good
337A:										
Plover-----	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
368B:										
Mahtomedi-----	Poor	Fair	Fair	Poor	Fair	Very poor	Very poor	Fair	Fair	Very poor
Cress-----	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
368C:										
Mahtomedi-----	Poor	Fair	Fair	Poor	Fair	Very poor	Very poor	Fair	Fair	Very poor
Cress-----	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor

Table 17.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life
368D:										
Mahtomedi-----	Poor	Fair	Fair	Poor	Fair	Very poor	Very poor	Fair	Fair	Very poor
Cress-----	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
371A:										
Croswell-----	Poor	Fair	Fair	Fair	Fair	Poor	Very poor	Fair	Fair	Very poor
380B:										
Cress-----	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
Rosholt-----	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
380C:										
Cress-----	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
Rosholt-----	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
380D:										
Cress-----	Poor	Fair	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
Rosholt-----	Very poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
383B:										
Mahtomedi-----	Poor	Fair	Fair	Poor	Fair	Very poor	Very poor	Fair	Fair	Very poor
383C:										
Mahtomedi-----	Poor	Fair	Fair	Poor	Fair	Very poor	Very poor	Fair	Fair	Very poor
383D:										
Mahtomedi-----	Very poor	Poor	Fair	Poor	Fair	Very poor	Very poor	Poor	Fair	Very poor
396B:										
Friendship-----	Poor	Poor	Fair	Fair	Good	Poor	Very poor	Fair	Good	Very poor
Wurtsmith-----	Poor	Poor	Fair	Fair	Fair	Poor	Very poor	Poor	Fair	Very poor
Grayling-----	Poor	Poor	Fair	Poor	Poor	Poor	Very poor	Poor	Poor	Very poor
397A:										
Perchlake-----	Poor	Fair	Good	Fair	Fair	Fair	Fair	Fair	Fair	Fair
399B:										
Grayling-----	Poor	Poor	Fair	Poor	Fair	Poor	Very poor	Poor	Fair	Very poor

Table 17.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life
399C: Grayling-----	Poor	Poor	Fair	Poor	Fair	Very poor	Very poor	Poor	Fair	Very poor
399D: Grayling-----	Very poor	Poor	Fair	Poor	Fair	Very poor	Very poor	Poor	Fair	Very poor
405A: Lupton-----	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
Cathro-----	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
Tawas-----	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
406A: Loxley-----	Very poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
407A: Seelyeville-----	Very poor	Very poor	Very poor	Very poor	Very poor	Good	Good	Very poor	Very poor	Good
Markey-----	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
410A: Seelyeville-----	Very poor	Very poor	Very poor	Very poor	Very poor	Good	Good	Very poor	Very poor	Good
Cathro-----	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
412A: Rifle-----	Very poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
Tacoosh-----	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
415A: Greenwood-----	Very poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
439B: Graycalm-----	Poor	Poor	Fair	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Menahga-----	Poor	Poor	Fair	Poor	Fair	Very poor	Very poor	Poor	Fair	Very poor
439C: Graycalm-----	Poor	Poor	Fair	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Menahga-----	Poor	Poor	Fair	Poor	Fair	Very poor	Very poor	Poor	Fair	Very poor
439D: Graycalm-----	Poor	Poor	Fair	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Menahga-----	Poor	Poor	Fair	Poor	Fair	Very poor	Very poor	Poor	Fair	Very poor

Table 17.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life
441C:										
Freeon-----	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Cathro-----	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
442C:										
Haugen-----	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Greenwood-----	Very poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
443D:										
Amery-----	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Greenwood-----	Very poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
461A:										
Bowstring-----	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
484A:										
Greenwood-----	Very poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
Beseman-----	Very poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
495B:										
Karlsborg-----	Fair	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Grettum-----	Poor	Poor	Fair	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Perida-----	Poor	Fair	Good	Fair	Fair	Poor	Poor	Fair	Fair	Poor
495C:										
Karlsborg-----	Poor	Good	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Grettum-----	Poor	Poor	Fair	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Perida-----	Poor	Fair	Good	Fair	Fair	Poor	Poor	Fair	Fair	Poor
495D:										
Karlsborg-----	Poor	Good	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Grettum-----	Poor	Poor	Fair	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Perida-----	Poor	Fair	Good	Fair	Fair	Poor	Poor	Fair	Fair	Poor
497A:										
Meenon-----	Poor	Fair	Good	Good	Good	Fair	Fair	Fair	Good	Fair
515A:										
Manitowish-----	Fair	Fair	Good	Good	Good	Poor	Poor	Fair	Good	Poor



Table 17.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life
521A: Dody-----	Poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
524E: Rock outcrop.										
Frogcreek-----	Very poor	Poor	Good	Good	Good	Poor	Very poor	Fair	Good	Very poor
Metonga-----	Very poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
542B: Haugen, very stony-----	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
Haugen-----	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
542C: Haugen, very stony-----	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
Haugen-----	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
543B: Anigon-----	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
543C2: Anigon-----	Fair	Good	Good	Good	Good	Very poor	Very poor	Good	Good	Very poor
544F: Menahga-----	Very poor	Poor	Fair	Poor	Fair	Very poor	Very poor	Poor	Fair	Very poor
Mahtomedi-----	Very poor	Poor	Fair	Poor	Fair	Very poor	Very poor	Poor	Fair	Very poor
555A: Fordum-----	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good
574B: Sayner-----	Poor	Fair	Fair	Poor	Poor	Very poor	Very poor	Fair	Poor	Very poor
574C: Sayner-----	Poor	Fair	Fair	Poor	Poor	Very poor	Very poor	Fair	Poor	Very poor
574E: Sayner-----	Very poor	Fair	Fair	Poor	Poor	Very poor	Very poor	Poor	Poor	Very poor
579B: Parkfalls-----	Fair	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor

Table 17.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life
600A: Haplosaprists and Psammaquents										
615B: Cress-----	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
615C: Cress-----	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
615D: Cress-----	Poor	Fair	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
623A: Capitola-----	Very poor	Poor	Fair	Fair	Fair	Good	Good	Poor	Fair	Good
624A: Ossmer-----	Fair	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair
632A: Aftad-----	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
632B: Aftad-----	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
632C: Aftad-----	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
633F: Pence-----	Very poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
Padus-----	Poor	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
648B: Sconsin-----	Good	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
670C: Keweenaw-----	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Pence-----	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
670E: Keweenaw-----	Very poor	Fair	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Pence-----	Very poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor

Table 17.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life
671B:										
Spoonerhill, stony-----	Poor	Fair	Good	Good	Good	Poor	Very poor	Fair	Good	Very poor
Spoonerhill-----	Poor	Fair	Good	Good	Good	Poor	Very poor	Fair	Good	Very poor
680B:										
Stanberry, stony-----	Very poor	Poor	Good	Good	Good	Poor	Very poor	Poor	Good	Very poor
Pence, stony-----	Very poor	Poor	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
683A:										
Tipler-----	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
706A:										
Winterfield-----	Poor	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair
Totagatic-----	Very poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
724A:										
Rib-----	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good
Rock outcrop.										
726B:										
Sissabagama-----	Poor	Fair	Fair	Fair	Fair	Poor	Very poor	Poor	Fair	Very poor
733A:										
Wozny-----	Very poor	Poor	Fair	Fair	Fair	Good	Good	Poor	Fair	Good
771A:										
Lenroot-----	Poor	Fair	Fair	Poor	Fair	Very poor	Very poor	Fair	Fair	Very poor
827A:										
Scoba-----	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
853C:										
Frogcreek-----	Poor	Good	Good	Good	Good	Poor	Very poor	Good	Good	Poor
Stinnett-----	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
Wozny-----	Very poor	Poor	Fair	Fair	Fair	Good	Good	Poor	Fair	Good
856B:										
Stinnett-----	Fair	Good	Good	Good	Good	Poor	Very poor	Good	Good	Very poor
857B:										
Frogcreek-----	Poor	Good	Good	Good	Good	Poor	Very poor	Good	Good	Poor

Table 17.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life
857C: Frogcreek-----	Poor	Good	Good	Good	Good	Poor	Very poor	Good	Good	Poor
873B: Stanberry-----	Very poor	Poor	Good	Good	Good	Poor	Very poor	Poor	Good	Very poor
873C: Stanberry-----	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
873D: Stanberry-----	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
905A: Cublake-----	Poor	Poor	Fair	Fair	Fair	Poor	Very poor	Poor	Fair	Very poor
926A: Flink-----	Poor	Fair	Good	Good	Good	Poor	Poor	Fair	Good	Poor
943D: Stanberry-----	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Greenwood-----	Very poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
948A: Billyboy-----	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
970C: Keweenaw-----	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Pence-----	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
Greenwood-----	Very poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
970E: Keweenaw-----	Very poor	Fair	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Pence-----	Poor	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
Greenwood-----	Very poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
1070C: Fremstadt-----	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Cress-----	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor

Table 17.--Wildlife Habitat--Continued

Map symbol and soil name	Potential for habitat elements							Potential as habitat for--		
	Grain and seed crops	Grasses and legumes	Wild herba- ceous plants	Hard- wood trees	Conif- erous plants	Wetland plants	Shallow water areas	Open- land wild- life	Wood- land wild- life	Wetland wild- life
1070D:										
Fremstadt-----	Poor	Fair	Good	Good	Good	Very poor	Very poor	Fair	Good	Very poor
Cress-----	Poor	Fair	Fair	Fair	Fair	Very poor	Very poor	Poor	Fair	Very poor
1080B:										
Spoonerhill-----	Poor	Fair	Good	Good	Good	Poor	Very poor	Fair	Good	Very poor
Spoonerhill, stony-----	Poor	Fair	Good	Good	Good	Poor	Very poor	Fair	Good	Very poor
Cress-----	Fair	Fair	Fair	Fair	Fair	Very poor	Very poor	Fair	Fair	Very poor
1653C:										
Stanberry-----	Very poor	Poor	Good	Good	Good	Very poor	Very poor	Poor	Good	Very poor
Parkfalls-----	Fair	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor
Wozny-----	Very poor	Poor	Fair	Fair	Fair	Good	Good	Poor	Fair	Good
2015. Pits										
2050. Landfill										
3011A:										
Barronett-----	Poor	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good
3125A:										
Meehan-----	Poor	Fair	Good	Fair	Fair	Fair	Fair	Fair	Fair	Fair
3126A:										
Wurtsmith-----	Poor	Poor	Fair	Fair	Fair	Poor	Very poor	Poor	Fair	Very poor
3276A:										
Au Gres-----	Poor	Fair	Good	Good	Good	Poor	Poor	Fair	Good	Poor
3312B:										
Glendenning, very stony	Fair	Fair	Good	Good	Good	Fair	Poor	Good	Good	Fair
Glendenning-----	Fair	Fair	Good	Good	Good	Fair	Poor	Good	Good	Fair
3336A:										
Fenander-----	Fair	Fair	Fair	Fair	Fair	Good	Good	Fair	Fair	Good
3403A:										
Loxley-----	Very poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
Beseman-----	Very poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good
Dawson-----	Very poor	Poor	Poor	Poor	Poor	Good	Good	Poor	Poor	Good

Table 17.--Wildlife Habitat--Continued

[illegible]

Table 18a.--Building Site Development

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. "Not rated" indicates that data are not available or that no rating is applicable. See text for further explanation of ratings in this table)

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3A:						
Totagatic-----	Very limited		Very limited		Very limited	
	Subsidence	1.00	Subsidence	1.00	Subsidence	1.00
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
Bowstring-----	Very limited		Very limited		Very limited	
	Subsidence	1.00	Subsidence	1.00	Subsidence	1.00
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Content of	1.00	Content of	1.00	Content of	1.00
	organic matter		organic matter		organic matter	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
Ausable-----	Very limited		Very limited		Very limited	
	Subsidence	1.00	Subsidence	1.00	Subsidence	1.00
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
22A:						
Comstock-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Shrink-swell	0.50			Shrink-swell	0.50
24A:						
Poskin-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
27A:						
Scott Lake-----	Not limited		Very limited		Not limited	
			Depth to	0.99		
			saturated zone			
28B:						
Haugen, very stony--	Somewhat limited		Very limited		Somewhat limited	
	Depth to	0.39	Depth to	1.00	Depth to	0.39
	saturated zone		saturated zone		saturated zone	
Haugen-----	Somewhat limited		Very limited		Somewhat limited	
	Depth to	0.39	Depth to	1.00	Depth to	0.39
	saturated zone		saturated zone		saturated zone	
Rosholt, very stony	Not limited		Not limited		Not limited	
Rosholt-----	Not limited		Not limited		Not limited	

Table 18a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
28C:						
Haugen, very stony--	Somewhat limited		Very limited		Very limited	
	Depth to	0.39	Depth to	1.00	Slope	1.00
	saturated zone		saturated zone		Depth to	0.39
	Slope	0.04	Slope	0.04	saturated zone	
Haugen-----	Somewhat limited		Very limited		Very limited	
	Depth to	0.39	Depth to	1.00	Slope	1.00
	saturated zone		saturated zone		Depth to	0.39
	Slope	0.04	Slope	0.04	saturated zone	
Rosholt, very stony	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.04	Slope	0.04	Slope	1.00
Rosholt-----	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.04	Slope	0.04	Slope	1.00
33B:						
Chetek-----	Not limited		Not limited		Not limited	
33C:						
Chetek-----	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.04	Slope	0.04	Slope	1.00
38A:						
Rosholt-----	Not limited		Not limited		Not limited	
38B:						
Rosholt-----	Not limited		Not limited		Not limited	
38C:						
Rosholt-----	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.04	Slope	0.04	Slope	1.00
38D:						
Rosholt-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
42D:						
Amery-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
43B:						
Antigo-----	Not limited		Not limited		Not limited	
43C:						
Antigo-----	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.37	Slope	0.37	Slope	1.00
43D:						
Antigo-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
48A:						
Brill-----	Somewhat limited		Very limited		Somewhat limited	
	Depth to	0.98	Depth to	1.00	Depth to	0.98
	saturated zone		saturated zone		saturated zone	



Table 18a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
63A: Crystal Lake-----	Somewhat limited Shrink-swell Depth to saturated zone	0.50 0.39	Very limited Depth to saturated zone	1.00	Somewhat limited Shrink-swell Depth to saturated zone	0.50 0.39
63B: Crystal Lake-----	Somewhat limited Shrink-swell Depth to saturated zone	0.50 0.39	Very limited Depth to saturated zone	1.00	Somewhat limited Shrink-swell Depth to saturated zone	0.50 0.39
63C: Crystal Lake-----	Somewhat limited Shrink-swell Depth to saturated zone Slope	0.50 0.39 0.04	Very limited Depth to saturated zone Slope	1.00 0.04	Very limited Slope Shrink-swell Depth to saturated zone	1.00 0.50 0.39
63E: Crystal Lake-----	Very limited Slope Shrink-swell	1.00 0.50	Very limited Slope Depth to saturated zone	1.00 0.99	Very limited Slope Shrink-swell	1.00 0.50
64A: Totagatic-----	Very limited Subsidence Flooding Depth to saturated zone Ponding	1.00 1.00 1.00 1.00	Very limited Subsidence Flooding Depth to saturated zone Ponding	1.00 1.00 1.00 1.00	Very limited Subsidence Flooding Depth to saturated zone Ponding	1.00 1.00 1.00 1.00
Winterfield-----	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00	Very limited Flooding Depth to saturated zone	1.00 1.00
69B: Keweenaw-----	Not limited		Not limited		Not limited	
Sayner-----	Not limited		Not limited		Not limited	
Vilas-----	Not limited		Not limited		Not limited	
69C: Keweenaw-----	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
Sayner-----	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
Vilas-----	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
69E: Keweenaw-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00

Table 18a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
69E:						
Sayner-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Vilas-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
74B:						
Vilas-----	Not limited		Not limited		Not limited	
74C:						
Vilas-----	Somewhat limited Slope	0.37	Somewhat limited Slope	0.37	Very limited Slope	1.00
74D:						
Vilas-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
100B:						
Menahga-----	Not limited		Not limited		Not limited	
100C:						
Menahga-----	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
100D:						
Menahga-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
127D:						
Amery-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Rosholt-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
127E:						
Amery-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Rosholt-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
156B:						
Magnor, very stony--	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Magnor-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
157B:						
Freeon, very stony--	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Freeon-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00

Table 18a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
157C: Freeon, very stony--	Very limited Depth to saturated zone Slope	1.00  0.04	Very limited Depth to saturated zone Slope	1.00  0.04	Very limited Depth to saturated zone Slope	1.00  1.00
Freeon-----	Very limited Depth to saturated zone Slope	1.00  0.04	Very limited Depth to saturated zone Slope	1.00  0.04	Very limited Depth to saturated zone Slope	1.00  1.00
160A: Oesterle-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
182B: Padus-----	Not limited		Not limited		Not limited	
182C: Padus-----	Somewhat limited Slope	0.37	Somewhat limited Slope	0.37	Very limited Slope	1.00
192A: Worcester-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
193A: Minocqua-----	Very limited Depth to saturated zone Ponding	1.00  1.00	Very limited Depth to saturated zone Ponding	1.00  1.00	Very limited Depth to saturated zone Ponding	1.00  1.00
215B: Pence-----	Not limited		Not limited		Not limited	
215C: Pence-----	Somewhat limited Slope	0.37	Somewhat limited Slope	0.37	Very limited Slope	1.00
215D: Pence-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
315A: Rib-----	Very limited Depth to saturated zone Ponding Shrink-swell	1.00  1.00 0.50	Very limited Depth to saturated zone Ponding	1.00  1.00	Very limited Depth to saturated zone Ponding Shrink-swell	1.00  1.00 0.50
337A: Plover-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
368B: Mahtomedi-----	Not limited		Not limited		Not limited	
Cress-----	Not limited		Not limited		Not limited	

Table 18a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
368C:						
Mahtomedi-----	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
Cress-----	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
368D:						
Mahtomedi-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Cress-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
371A:						
Croswell-----	Somewhat limited Depth to saturated zone	0.39	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.39
380B:						
Cress-----	Not limited		Not limited		Not limited	
Rosholt-----	Not limited		Not limited		Not limited	
380C:						
Cress-----	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
Rosholt-----	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
380D:						
Cress-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Rosholt-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
383B:						
Mahtomedi-----	Not limited		Not limited		Not limited	
383C:						
Mahtomedi-----	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
383D:						
Mahtomedi-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
396B:						
Friendship-----	Not limited		Somewhat limited Depth to saturated zone	0.35	Not limited	
Wurtsmith-----	Somewhat limited Depth to saturated zone	0.39	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.39
Grayling-----	Not limited		Not limited		Not limited	

Table 18a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
397A: Perchlake-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
399B: Grayling-----	Not limited		Not limited		Not limited	
399C: Grayling-----	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
399D: Grayling-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
405A: Lupton-----	Very limited Subsidence Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00 1.00	Very limited Subsidence Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00 1.00	Very limited Subsidence Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00 1.00
Cathro-----	Very limited Subsidence Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00 1.00	Very limited Subsidence Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Subsidence Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00 1.00
Tawas-----	Very limited Subsidence Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00 1.00	Very limited Subsidence Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Subsidence Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00 1.00
406A: Loxley-----	Very limited Subsidence Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00 1.00	Very limited Subsidence Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00 1.00	Very limited Subsidence Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00 1.00
407A: Seelyeville-----	Very limited Subsidence Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00 1.00	Very limited Subsidence Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00 1.00	Very limited Subsidence Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00 1.00

Table 18a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
407A: Markey-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Content of	1.00	Ponding	1.00	Content of	1.00
	organic matter				organic matter	
	Ponding	1.00			Ponding	1.00
410A: Seelyeville-----	Very limited		Very limited		Very limited	
	Subsidence	1.00	Subsidence	1.00	Subsidence	1.00
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Content of	1.00	Content of	1.00	Content of	1.00
	organic matter		organic matter		organic matter	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
Cathro-----	Very limited		Very limited		Very limited	
	Subsidence	1.00	Subsidence	1.00	Subsidence	1.00
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Content of	1.00	Ponding	1.00	Content of	1.00
	organic matter				organic matter	
	Ponding	1.00			Ponding	1.00
412A: Rifle-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Content of	1.00	Content of	1.00	Content of	1.00
	organic matter		organic matter		organic matter	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
Tacoosh-----	Very limited		Very limited		Very limited	
	Subsidence	1.00	Subsidence	1.00	Subsidence	1.00
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Content of	1.00	Ponding	1.00	Content of	1.00
	organic matter				organic matter	
	Ponding	1.00			Ponding	1.00
415A: Greenwood-----	Very limited		Very limited		Very limited	
	Subsidence	1.00	Subsidence	1.00	Subsidence	1.00
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Content of	1.00	Content of	1.00	Content of	1.00
	organic matter		organic matter		organic matter	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
439B: Graycalm-----	Not limited		Not limited		Not limited	
Menahga-----	Not limited		Not limited		Not limited	
439C: Graycalm-----	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.04	Slope	0.04	Slope	1.00
Menahga-----	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.04	Slope	0.04	Slope	1.00

Table 18a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
439D:						
Graycalm-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Menahga-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
441C:						
Freeon-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
	Slope	0.37	Slope	0.37	Slope	1.00
Cathro-----	Very limited Subsidence	1.00	Very limited Subsidence	1.00	Very limited Subsidence	1.00
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Content of	1.00	Ponding	1.00	Content of	1.00
	organic matter				organic matter	
	Ponding	1.00			Ponding	1.00
442C:						
Haugen-----	Somewhat limited Depth to	0.39	Very limited Depth to	1.00	Somewhat limited Slope	0.88
	saturated zone		saturated zone		Depth to	0.39
					saturated zone	
Greenwood-----	Very limited Depth to	1.00	Very limited Depth to	1.00	Very limited Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Content of	1.00	Content of	1.00	Content of	1.00
	organic matter		organic matter		organic matter	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
443D:						
Amery-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Greenwood-----	Very limited Depth to	1.00	Very limited Depth to	1.00	Very limited Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Content of	1.00	Content of	1.00	Content of	1.00
	organic matter		organic matter		organic matter	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
461A:						
Bowstring-----	Very limited Subsidence	1.00	Very limited Subsidence	1.00	Very limited Subsidence	1.00
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Content of	1.00	Content of	1.00	Content of	1.00
	organic matter		organic matter		organic matter	
	Ponding	1.00	Ponding	1.00	Ponding	1.00

Table 18a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
484A:						
Greenwood-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Content of	1.00	Content of	1.00	Content of	1.00
	organic matter		organic matter		organic matter	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
Beseman-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Content of	1.00	Subsidence	1.00	Content of	1.00
	organic matter		Ponding	1.00	organic matter	
	Subsidence	1.00			Subsidence	1.00
	Ponding	1.00			Ponding	1.00
495B:						
Karlsborg-----	Somewhat limited		Very limited		Somewhat limited	
	Depth to	0.98	Depth to	1.00	Depth to	0.98
	saturated zone		saturated zone		saturated zone	
Grettum-----	Not limited		Somewhat limited		Not limited	
			Depth to	0.35		
			saturated zone			
Perida-----	Not limited		Somewhat limited		Not limited	
			Depth to	0.82		
			saturated zone			
495C:						
Karlsborg-----	Somewhat limited		Very limited		Very limited	
	Depth to	0.98	Depth to	1.00	Slope	1.00
	saturated zone		saturated zone		Depth to	0.98
	Slope	0.04	Slope	0.04	saturated zone	
Grettum-----	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.04	Depth to	0.35	Slope	1.00
			saturated zone			
			Slope	0.04		
Perida-----	Somewhat limited		Somewhat limited		Very limited	
	Slope	0.04	Depth to	0.82	Slope	1.00
			saturated zone			
			Slope	0.04		
495D:						
Karlsborg-----	Very limited		Very limited		Very limited	
	Slope	1.00	Depth to	1.00	Slope	1.00
	Depth to	0.98	saturated zone		Depth to	0.98
	saturated zone		Slope	1.00	saturated zone	
Grettum-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
			Depth to	0.35		
			saturated zone			
Perida-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
			Depth to	0.82		
			saturated zone			



Table 18a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
497A: Meenon-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
515A: Manitowish-----	Not limited		Very limited Depth to saturated zone	0.99	Not limited	
521A: Dody-----	Very limited Depth to saturated zone Shrink-swell Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Shrink-swell Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Shrink-swell Ponding	1.00 1.00 1.00
524E: Rock outcrop-----	Not rated		Not rated		Not rated	
Frogcreek-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Slope	1.00 1.00
Metonga-----	Very limited Slope Depth to hard bedrock	1.00 0.42	Very limited Slope Depth to hard bedrock	1.00 1.00	Very limited Slope Depth to hard bedrock	1.00 0.42
542B: Haugen, very stony--	Somewhat limited Depth to saturated zone	0.39	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.39
Haugen-----	Somewhat limited Depth to saturated zone	0.39	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.39
542C: Haugen, very stony--	Somewhat limited Depth to saturated zone Slope	0.39 0.04	Very limited Depth to saturated zone Slope	1.00 0.04	Very limited Slope Depth to saturated zone	1.00 0.39
Haugen-----	Somewhat limited Depth to saturated zone Slope	0.39 0.04	Very limited Depth to saturated zone Slope	1.00 0.04	Very limited Slope Depth to saturated zone	1.00 0.39
543B: Anigon-----	Not limited		Not limited		Not limited	
543C2: Anigon-----	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00

Table 18a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
544F: Menahga-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Mahtomedi-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
555A: Fordum-----	Very limited Flooding	1.00	Very limited Flooding	1.00	Very limited Flooding	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
574B: Sayner-----	Not limited		Not limited		Not limited	
574C: Sayner-----	Somewhat limited Slope	0.37	Somewhat limited Slope	0.37	Very limited Slope	1.00
574E: Sayner-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
579B: Parkfalls-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
600A: Haplosaprists-----	Not rated		Not rated		Not rated	
Psammaquents-----	Not rated		Not rated		Not rated	
615B: Cress-----	Not limited		Not limited		Not limited	
615C: Cress-----	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
615D: Cress-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
623A: Capitola-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
624A: Ossmer-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
632A: Aftad-----	Somewhat limited Depth to saturated zone	0.39	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.39

Table 18a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
632B: Aftad-----	Somewhat limited Depth to saturated zone	0.39	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.39
632C: Aftad-----	Somewhat limited Depth to saturated zone Slope	0.39 0.04	Very limited Depth to saturated zone Slope	1.00 0.04	Very limited Slope Depth to saturated zone	1.00 0.39
633F: Pence-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Padus-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
648B: Sconsin-----	Somewhat limited Depth to saturated zone	0.98	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.98
670C: Keweenaw-----	Somewhat limited Slope	0.37	Somewhat limited Slope	0.37	Very limited Slope	1.00
Pence-----	Somewhat limited Slope	0.37	Somewhat limited Slope	0.37	Very limited Slope	1.00
670E: Keweenaw-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Pence-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
671B: Spoonershill, stony--	Somewhat limited Depth to saturated zone	0.39	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.39
Spoonershill-----	Somewhat limited Depth to saturated zone	0.39	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.39
680B: Stanberry, stony----	Somewhat limited Depth to saturated zone	0.39	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.39
Pence, stony-----	Not limited		Not limited		Not limited	
683A: Tipler-----	Not limited		Very limited Depth to saturated zone	0.99	Not limited	

Table 18a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
706A:						
Winterfield-----	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
Totagatic-----	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Flooding	1.00
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
724A:						
Rib-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
	Shrink-swell	0.50			Shrink-swell	0.50
Rock outcrop-----	Not rated		Not rated		Not rated	
726B:						
Sissabagama-----	Not limited		Very limited		Not limited	
			Depth to	0.99		
			saturated zone			
733A:						
Wozny-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
771A:						
Lenroot-----	Somewhat limited		Very limited		Somewhat limited	
	Depth to	0.39	Depth to	1.00	Depth to	0.39
	saturated zone		saturated zone		saturated zone	
827A:						
Scoba-----	Somewhat limited		Very limited		Somewhat limited	
	Depth to	0.39	Depth to	1.00	Depth to	0.39
	saturated zone		saturated zone		saturated zone	
853C:						
Frogcreek-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
					Slope	1.00
Stinnett-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
Wozny-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
856B:						
Stinnett-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	

Table 18a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
857B: Frogcreek-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
857C: Frogcreek-----	Very limited Depth to saturated zone Slope	1.00 0.16	Very limited Depth to saturated zone Slope	1.00 0.16	Very limited Depth to saturated zone Slope	1.00 1.00
873B: Stanberry-----	Somewhat limited Depth to saturated zone	0.39	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.39
873C: Stanberry-----	Somewhat limited Depth to saturated zone Slope	0.39 0.37	Very limited Depth to saturated zone Slope	1.00 0.37	Very limited Slope Depth to saturated zone	1.00 0.39
873D: Stanberry-----	Very limited Slope Depth to saturated zone	1.00 0.39	Very limited Slope Depth to saturated zone	1.00 1.00	Very limited Slope Depth to saturated zone	1.00 0.39
905A: Cublake-----	Not limited		Very limited Depth to saturated zone	0.99	Not limited	
926A: Flink-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
943D: Stanberry-----	Very limited Slope Depth to saturated zone	1.00 0.39	Very limited Depth to saturated zone Slope	1.00 1.00	Very limited Slope Depth to saturated zone	1.00 0.39
Greenwood-----	Very limited Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00
948A: Billyboy-----	Somewhat limited Depth to saturated zone	0.98	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.98
970C: Keweenaw-----	Somewhat limited Slope	0.37	Somewhat limited Slope	0.37	Very limited Slope	1.00

Table 18a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
970C:						
Pence-----	Somewhat limited Slope	0.37	Somewhat limited Slope	0.37	Very limited Slope	1.00
Greenwood-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
	Content of organic matter	1.00	Content of organic matter	1.00	Content of organic matter	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
970E:						
Keweenaw-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Pence-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Greenwood-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
	Content of organic matter	1.00	Content of organic matter	1.00	Content of organic matter	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
1070C:						
Fremstadt-----	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	Very limited Slope	1.00
Cress-----	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00
1070D:						
Fremstadt-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
Cress-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope	1.00
1080B:						
Spoonerhill-----	Somewhat limited Depth to saturated zone	0.39	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.39
Spoonerhill, stony--	Somewhat limited Depth to saturated zone	0.39	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.39
Cress-----	Not limited		Not limited		Not limited	
1653C:						
Stanberry-----	Somewhat limited Depth to saturated zone	0.39	Very limited Depth to saturated zone	1.00	Very limited Slope	1.00
	Slope	0.04	Slope	0.04	Depth to saturated zone	0.39
Parkfalls-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00

Table 18a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1653C: Wozny-----	Very limited Depth to saturated zone Ponding	1.00  1.00	Very limited Depth to saturated zone Ponding	1.00  1.00	Very limited Depth to saturated zone Ponding	1.00  1.00
2015: Pits-----	Not rated		Not rated		Not rated	
2050: Landfill-----	Not rated		Not rated		Not rated	
3011A: Barronett-----	Very limited Depth to saturated zone Ponding Shrink-swell	1.00  1.00 0.50	Very limited Depth to saturated zone Ponding	1.00  1.00	Very limited Depth to saturated zone Ponding Shrink-swell	1.00  1.00 0.50
3125A: Meehan-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
3126A: Wurtsmith-----	Somewhat limited Depth to saturated zone	0.39	Very limited Depth to saturated zone	1.00	Somewhat limited Depth to saturated zone	0.39
3276A: Au Gres-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
3312B: Glendenning, very stony-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Glendenning-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
3336A: Fenander-----	Very limited Depth to saturated zone Ponding	1.00  1.00	Very limited Depth to saturated zone Ponding	1.00  1.00	Very limited Depth to saturated zone Ponding	1.00  1.00
3403A: Loxley-----	Very limited Subsidence Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00 1.00	Very limited Subsidence Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00 1.00	Very limited Subsidence Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00 1.00

Table 18a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3403A: Beseman-----	Very limited Depth to saturated zone Content of organic matter Subsidence Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Subsidence Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Subsidence Ponding	1.00 1.00 1.00 1.00
Dawson-----	Very limited Subsidence Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00 1.00	Very limited Subsidence Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Subsidence Depth to saturated zone Content of organic matter Ponding	1.00 1.00 1.00 1.00
3424C: Frogcreek-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Slope	1.00 1.00
Magroc-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Depth to hard bedrock	1.00 0.42	Very limited Depth to saturated zone	1.00
Stinnett-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Rock outcrop-----	Not rated		Not rated		Not rated	
3446A: Newson-----	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
3448B: Grettum-----	Not limited		Somewhat limited Depth to saturated zone	0.35	Not limited	
3448C: Grettum-----	Somewhat limited Slope	0.04	Somewhat limited Depth to saturated zone Slope	0.35 0.04	Very limited Slope	1.00
3516A: Slimlake-----	Not limited		Very limited Depth to saturated zone	0.99	Not limited	
3629B: Perida-----	Not limited		Somewhat limited Depth to saturated zone	0.82	Not limited	



Table 18a.--Building Site Development--Continued

Map symbol and soil name	Dwellings without basements		Dwellings with basements		Small commercial buildings	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
M-W: Miscellaneous water	Not rated		Not rated		Not rated	
W: Water-----	Not rated		Not rated		Not rated	

Table 18b.--Building Site Development

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. "Not rated" indicates that data are not available or that no rating is applicable. See text for further explanation of ratings in this table)

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3A:						
Totagatic-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Flooding	1.00
	saturated zone		saturated zone		Depth to	1.00
	Subsidence	1.00	Cutbanks cave	1.00	saturated zone	
	Flooding	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Flooding	0.80		
	Frost action	0.50				
Bowstring-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Flooding	1.00
	saturated zone		saturated zone		Content of	1.00
	Subsidence	1.00	Cutbanks cave	1.00	organic matter	
	Frost action	1.00	Ponding	1.00	Depth to	1.00
	Flooding	1.00	Content of	1.00	saturated zone	
	Ponding	1.00	organic matter		Ponding	1.00
			Flooding	0.80		
Ausable-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Flooding	1.00
	saturated zone		saturated zone		Depth to	1.00
	Subsidence	1.00	Cutbanks cave	1.00	saturated zone	
	Flooding	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Flooding	0.80		
	Frost action	0.50				
22A:						
Comstock-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Frost action	1.00	Cutbanks cave	1.00		
	Low strength	1.00				
	Shrink-swell	0.50				
24A:						
Poskin-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Frost action	1.00	Cutbanks cave	1.00		
	Low strength	1.00				
27A:						
Scott Lake-----	Somewhat limited		Very limited		Somewhat limited	
	Frost action	0.50	Cutbanks cave	1.00	Droughty	0.01
			Depth to	0.99		
			saturated zone			
28B:						
Haugen, very stony--	Somewhat limited		Very limited		Somewhat limited	
	Frost action	0.50	Depth to	1.00	Depth to	0.19
	Depth to	0.19	saturated zone		saturated zone	
	saturated zone		Cutbanks cave	1.00	Content of large	0.03
					stones	

Table 18b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
28B: Haugen-----	Somewhat limited Frost action Depth to saturated zone	0.50 0.19	Very limited Depth to saturated zone Cutbanks cave	1.00 1.00	Somewhat limited Depth to saturated zone Content of large stones	0.19 0.03
Rosholt, very stony	Somewhat limited Frost action	0.50	Very limited Cutbanks cave	1.00	Somewhat limited Droughty Content of large stones	0.02 0.01
Rosholt-----	Somewhat limited Frost action	0.50	Very limited Cutbanks cave	1.00	Somewhat limited Droughty	0.01
28C: Haugen, very stony--	Somewhat limited Frost action Depth to saturated zone Slope	0.50 0.19 0.04	Very limited Depth to saturated zone Cutbanks cave Slope	1.00 1.00 0.04	Somewhat limited Depth to saturated zone Slope Content of large stones	0.19 0.04 0.03
Haugen-----	Somewhat limited Frost action Depth to saturated zone Slope	0.50 0.19 0.04	Very limited Depth to saturated zone Cutbanks cave Slope	1.00 1.00 0.04	Somewhat limited Depth to saturated zone Slope Content of large stones	0.19 0.04 0.03
Rosholt, very stony	Somewhat limited Frost action Slope	0.50 0.04	Very limited Cutbanks cave Slope	1.00 0.04	Somewhat limited Slope Droughty Content of large stones	0.04 0.02 0.01
Rosholt-----	Somewhat limited Frost action Slope	0.50 0.04	Very limited Cutbanks cave Slope	1.00 0.04	Somewhat limited Slope Droughty	0.04 0.01
33B: Chetek-----	Not limited		Very limited Cutbanks cave	1.00	Somewhat limited Droughty Content of large stones	0.61 0.01
33C: Chetek-----	Somewhat limited Slope	0.04	Very limited Cutbanks cave Slope	1.00 0.04	Somewhat limited Droughty Slope Content of large stones	0.61 0.04 0.01
38A: Rosholt-----	Somewhat limited Frost action	0.50	Very limited Cutbanks cave	1.00	Somewhat limited Droughty	0.01
38B: Rosholt-----	Somewhat limited Frost action	0.50	Very limited Cutbanks cave	1.00	Somewhat limited Droughty	0.01

Table 18b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
38C: Rosholt-----	Somewhat limited		Very limited		Somewhat limited	
	Frost action	0.50	Cutbanks cave	1.00	Slope	0.04
	Slope	0.04	Slope	0.04	Droughty	0.01
38D: Rosholt-----	Very limited		Very limited		Very limited	
	Slope	1.00	Cutbanks cave	1.00	Slope	1.00
	Frost action	0.50	Slope	1.00	Droughty	0.01
42D: Amery-----	Very limited		Very limited		Very limited	
	Slope	1.00	Cutbanks cave	1.00	Slope	1.00
	Frost action	0.50	Slope	1.00	Content of large stones	0.03
43B: Antigo-----	Somewhat limited		Very limited		Not limited	
	Frost action	0.50	Cutbanks cave	1.00		
43C: Antigo-----	Somewhat limited		Very limited		Somewhat limited	
	Frost action	0.50	Cutbanks cave	1.00	Slope	0.37
	Slope	0.37	Slope	0.37		
43D: Antigo-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Frost action	0.50	Cutbanks cave	1.00		
48A: Brill-----	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to	1.00	Depth to	0.75
	Low strength	0.78	saturated zone		saturated zone	
	Depth to saturated zone	0.75	Cutbanks cave	1.00		
63A: Crystal Lake-----	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to	1.00	Depth to	0.19
	Low strength	1.00	saturated zone		saturated zone	
	Shrink-swell	0.50	Cutbanks cave	1.00		
	Depth to saturated zone	0.19				
63B: Crystal Lake-----	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to	1.00	Depth to	0.19
	Low strength	1.00	saturated zone		saturated zone	
	Shrink-swell	0.50	Cutbanks cave	1.00		
	Depth to saturated zone	0.19				
63C: Crystal Lake-----	Very limited		Very limited		Somewhat limited	
	Frost action	1.00	Depth to	1.00	Depth to	0.19
	Low strength	1.00	saturated zone		saturated zone	
	Shrink-swell	0.50	Cutbanks cave	1.00	Slope	0.04
	Depth to saturated zone	0.19	Slope	0.04		
	Slope	0.04				

Table 18b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
63E: Crystal Lake-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Frost action	1.00	Cutbanks cave	1.00		
	Low strength	1.00	Depth to	0.99		
	Shrink-swell	0.50	saturated zone			
64A: Totagatic-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Flooding	1.00
	saturated zone		saturated zone		Depth to	1.00
	Subsidence	1.00	Cutbanks cave	1.00	saturated zone	
	Flooding	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Flooding	0.80		
	Frost action	0.50				
Winterfield-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Flooding	1.00
	saturated zone		saturated zone		Depth to	1.00
	Flooding	1.00	Cutbanks cave	1.00	saturated zone	
			Flooding	0.80	Droughty	0.50
69B: Keweenaw-----	Not limited		Very limited		Somewhat limited	
			Cutbanks cave	1.00	Droughty	0.06
					Content of large	0.01
					stones	
Sayner-----	Not limited		Very limited		Somewhat limited	
			Cutbanks cave	1.00	Droughty	0.94
					Content of large	0.05
					stones	
Vilas-----	Not limited		Very limited		Somewhat limited	
			Cutbanks cave	1.00	Droughty	0.42
69C: Keweenaw-----	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.16	Cutbanks cave	1.00	Slope	0.16
			Slope	0.16	Droughty	0.06
					Content of large	0.01
					stones	
Sayner-----	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.16	Cutbanks cave	1.00	Droughty	0.94
			Slope	0.16	Slope	0.16
					Content of large	0.05
					stones	
Vilas-----	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.16	Cutbanks cave	1.00	Droughty	0.42
			Slope	0.16	Slope	0.16
69E: Keweenaw-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
			Cutbanks cave	1.00	Droughty	0.06
					Content of large	0.01
					stones	

Table 18b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
69E: Sayner-----	Very limited Slope	1.00	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Droughty Content of large stones	1.00 0.94 0.05
Vilas-----	Very limited Slope	1.00	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Droughty	1.00 0.42
74B: Vilas-----	Not limited		Very limited Cutbanks cave	1.00	Somewhat limited Droughty	0.42
74C: Vilas-----	Somewhat limited Slope	0.37	Very limited Cutbanks cave Slope	1.00 0.37	Somewhat limited Droughty Slope	0.42 0.37
74D: Vilas-----	Very limited Slope	1.00	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Droughty	1.00 0.42
100B: Menahga-----	Not limited		Very limited Cutbanks cave	1.00	Somewhat limited Droughty Too sandy	0.93 0.50
100C: Menahga-----	Somewhat limited Slope	0.04	Very limited Cutbanks cave Slope	1.00 0.04	Somewhat limited Droughty Slope	0.51 0.04
100D: Menahga-----	Very limited Slope	1.00	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope Droughty	1.00 0.51
127D: Amery-----	Very limited Slope Frost action	1.00 0.50	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope Content of large stones	1.00 0.03
Rosholt-----	Very limited Slope Frost action	1.00 0.50	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope Droughty Content of large stones	1.00 0.02 0.01
127E: Amery-----	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Content of large stones	1.00 0.03

Table 18b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
127E: Rosholt-----	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Droughty Content of large stones	1.00 0.02 0.01
156B: Magnor, very stony--	Very limited Depth to saturated zone Frost action	1.00 0.50	Very limited Depth to saturated zone Dense layer Cutbanks cave	1.00 0.50 0.10	Very limited Depth to saturated zone Content of large stones	1.00 0.01
Magnor-----	Very limited Depth to saturated zone Frost action	1.00 0.50	Very limited Depth to saturated zone Dense layer Cutbanks cave	1.00 0.50 0.10	Very limited Depth to saturated zone	1.00
157B: Freeon, very stony--	Very limited Depth to saturated zone Frost action	1.00 0.50	Very limited Depth to saturated zone Dense layer Cutbanks cave	1.00 0.50 0.10	Very limited Depth to saturated zone	1.00
Freeon-----	Very limited Depth to saturated zone Frost action	1.00 0.50	Very limited Depth to saturated zone Dense layer Cutbanks cave	1.00 0.50 0.10	Very limited Depth to saturated zone Content of large stones	1.00 0.01
157C: Freeon, very stony--	Very limited Depth to saturated zone Frost action Slope	1.00 0.50 0.04	Very limited Depth to saturated zone Dense layer Cutbanks cave Slope	1.00 0.50 0.10 0.04	Very limited Depth to saturated zone Slope	1.00 0.04
Freeon-----	Very limited Depth to saturated zone Frost action Slope	1.00 0.50 0.04	Very limited Depth to saturated zone Dense layer Cutbanks cave Slope	1.00 0.50 0.10 0.04	Very limited Depth to saturated zone Slope Content of large stones	1.00 0.04 0.01
160A: Oesterle-----	Very limited Depth to saturated zone Frost action	1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 1.00	Very limited Depth to saturated zone	1.00
182B: Padus-----	Somewhat limited Frost action	0.50	Very limited Cutbanks cave	1.00	Not limited	

Table 18b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
182C: Padus-----	Somewhat limited Frost action Slope	0.50 0.37	Very limited Cutbanks cave Slope	1.00 0.37	Somewhat limited Slope	0.37
192A: Worcester-----	Very limited Depth to saturated zone Frost action	1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 1.00	Very limited Depth to saturated zone	1.00
193A: Minocqua-----	Very limited Depth to saturated zone Frost action Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Cutbanks cave Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
215B: Pence-----	Not limited		Very limited Cutbanks cave	1.00	Somewhat limited Droughty Content of large stones	0.30 0.01
215C: Pence-----	Somewhat limited Slope	0.37	Very limited Cutbanks cave Slope	1.00 0.37	Somewhat limited Slope Droughty Content of large stones	0.37 0.30 0.01
215D: Pence-----	Very limited Slope	1.00	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Droughty Content of large stones	1.00 0.30 0.01
315A: Rib-----	Very limited Depth to saturated zone Frost action Low strength Ponding Shrink-swell	1.00 1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
337A: Plover-----	Very limited Depth to saturated zone Frost action	1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 1.00	Very limited Depth to saturated zone	1.00
368B: Mahtomedi-----	Not limited		Very limited Cutbanks cave	1.00	Very limited Droughty	1.00
Cress-----	Not limited		Very limited Cutbanks cave	1.00	Somewhat limited Droughty	0.13



Table 18b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
368C:						
Mahtomedi-----	Somewhat limited Slope	0.04	Very limited Cutbanks cave Slope	1.00 0.04	Very limited Droughty Slope	1.00 0.04
Cress-----	Somewhat limited Slope	0.04	Very limited Cutbanks cave Slope	1.00 0.04	Somewhat limited Droughty Slope	0.13 0.04
368D:						
Mahtomedi-----	Very limited Slope	1.00	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope Droughty	1.00 1.00
Cress-----	Very limited Slope	1.00	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope Droughty	1.00 0.13
371A:						
Croswell-----	Somewhat limited Depth to saturated zone	0.19	Very limited Depth to saturated zone Cutbanks cave	1.00 1.00	Somewhat limited Droughty Depth to saturated zone	0.54 0.19
380B:						
Cress-----	Not limited		Very limited Cutbanks cave	1.00	Somewhat limited Droughty	0.13
Rosholt-----	Somewhat limited Frost action	0.50	Very limited Cutbanks cave	1.00	Somewhat limited Droughty	0.01
380C:						
Cress-----	Somewhat limited Slope	0.04	Very limited Cutbanks cave Slope	1.00 0.04	Somewhat limited Droughty Slope	0.13 0.04
Rosholt-----	Somewhat limited Frost action Slope	0.50 0.04	Very limited Cutbanks cave Slope	1.00 0.04	Somewhat limited Slope Droughty	0.04 0.01
380D:						
Cress-----	Very limited Slope	1.00	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope Droughty	1.00 0.13
Rosholt-----	Very limited Slope Frost action	1.00 0.50	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope Droughty	1.00 0.01
383B:						
Mahtomedi-----	Not limited		Very limited Cutbanks cave	1.00	Very limited Droughty	1.00
383C:						
Mahtomedi-----	Somewhat limited Slope	0.04	Very limited Cutbanks cave Slope	1.00 0.04	Very limited Droughty Slope	1.00 0.04

Table 18b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
383D: Mahtomedi-----	Very limited Slope	1.00	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope Droughty	1.00 1.00
396B: Friendship-----	Not limited		Very limited Cutbanks cave Depth to saturated zone	1.00 0.35	Somewhat limited Droughty Too sandy	0.91 0.50
Wurtsmith-----	Somewhat limited Depth to saturated zone	0.19	Very limited Depth to saturated zone Cutbanks cave	1.00 1.00	Somewhat limited Droughty Too sandy Depth to saturated zone	0.87 0.50 0.19
Grayling-----	Not limited		Very limited Cutbanks cave	1.00	Very limited Droughty Too sandy	1.00 0.50
397A: Perchlake-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Cutbanks cave	1.00 1.00	Very limited Depth to saturated zone Droughty	1.00 0.36
399B: Grayling-----	Not limited		Very limited Cutbanks cave	1.00	Very limited Droughty Too sandy	1.00 0.50
399C: Grayling-----	Somewhat limited Slope	0.04	Very limited Cutbanks cave Slope	1.00 0.04	Very limited Droughty Too sandy Slope	1.00 0.50 0.04
399D: Grayling-----	Very limited Slope	1.00	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Droughty Slope Too sandy	1.00 1.00 0.50
405A: Lupton-----	Very limited Depth to saturated zone Subsidence Frost action Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Ponding Cutbanks cave	1.00 1.00 1.00 1.00 0.10	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00
Cathro-----	Very limited Depth to saturated zone Subsidence Frost action Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Ponding Content of organic matter Cutbanks cave	1.00 1.00 1.00 1.00 0.10	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00

Table 18b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
405A: Tawas-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Content of	1.00
	saturated zone		saturated zone		organic matter	
	Subsidence	1.00	Cutbanks cave	1.00	Depth to	1.00
	Frost action	1.00	Ponding	1.00	saturated zone	
	Ponding	1.00	Content of	1.00	Ponding	1.00
			organic matter			
406A: Loxley-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Content of	1.00
	saturated zone		saturated zone		organic matter	
	Subsidence	1.00	Content of	1.00	Depth to	1.00
	Frost action	1.00	organic matter		saturated zone	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
			Cutbanks cave	0.10		
407A: Seelyeville-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Content of	1.00
	saturated zone		saturated zone		organic matter	
	Subsidence	1.00	Content of	1.00	Depth to	1.00
	Frost action	1.00	organic matter		saturated zone	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
			Cutbanks cave	0.10		
Markey-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Content of	1.00
	saturated zone		saturated zone		organic matter	
	Frost action	1.00	Cutbanks cave	1.00	Depth to	1.00
	Ponding	1.00	Ponding	1.00	saturated zone	
			Content of	1.00	Ponding	1.00
			organic matter			
410A: Seelyeville-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Content of	1.00
	saturated zone		saturated zone		organic matter	
	Subsidence	1.00	Content of	1.00	Depth to	1.00
	Frost action	1.00	organic matter		saturated zone	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
			Cutbanks cave	0.10		
Cathro-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Content of	1.00
	saturated zone		saturated zone		organic matter	
	Subsidence	1.00	Ponding	1.00	Depth to	1.00
	Frost action	1.00	Content of	1.00	saturated zone	
	Ponding	1.00	organic matter		Ponding	1.00
			Cutbanks cave	0.10		
412A: Rifle-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Frost action	1.00	Content of	1.00	Ponding	1.00
	Ponding	1.00	organic matter			
			Ponding	1.00		
			Cutbanks cave	0.10		

Table 18b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
412A: Tacoosh-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Subsidence	1.00	Ponding	1.00	Ponding	1.00
	Frost action	1.00	Content of organic matter	1.00		
	Ponding	1.00	Cutbanks cave	0.10		
415A: Greenwood-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Content of organic matter	1.00
	Subsidence	1.00	Content of organic matter	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00	Cutbanks cave	0.10		
439B: Graycalm-----	Not limited		Very limited Cutbanks cave	1.00	Somewhat limited Droughty	0.29
Menahga-----	Not limited		Very limited Cutbanks cave	1.00	Somewhat limited Droughty	0.49
439C: Graycalm-----	Somewhat limited Slope	0.04	Very limited Cutbanks cave Slope	1.00 0.04	Somewhat limited Droughty Slope	0.29 0.04
Menahga-----	Somewhat limited Slope	0.04	Very limited Cutbanks cave Slope	1.00 0.04	Somewhat limited Droughty Slope	0.49 0.04
439D: Graycalm-----	Very limited Slope	1.00	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope Droughty	1.00 0.29
Menahga-----	Very limited Slope	1.00	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope Droughty	1.00 0.49
441C: Freeon-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	0.50	Dense layer	0.50	Slope	0.37
	Slope	0.37	Slope	0.37		
			Cutbanks cave	0.10		
Cathro-----	Very limited		Very limited		Not rated	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00		
	Subsidence	1.00	Ponding	1.00		
	Frost action	1.00	Content of organic matter	1.00		
	Ponding	1.00	Cutbanks cave	0.10		

Table 18b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
442C: Haugen-----	Somewhat limited Frost action Depth to saturated zone	0.50 0.19	Very limited Depth to saturated zone Cutbanks cave	1.00 1.00	Somewhat limited Depth to saturated zone Content of large stones	0.19 0.03
Greenwood-----	Very limited Depth to saturated zone Frost action Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Ponding Cutbanks cave	1.00 1.00 1.00 1.00 0.10	Very limited Depth to saturated zone Ponding	1.00 1.00
443D: Amery-----	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Content of large stones	1.00 0.03
Greenwood-----	Very limited Depth to saturated zone Frost action Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Ponding Cutbanks cave	1.00 1.00 1.00 1.00 0.10	Very limited Depth to saturated zone Ponding	1.00 1.00
461A: Bowstring-----	Very limited Depth to saturated zone Subsidence Frost action Flooding Ponding	1.00 1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Cutbanks cave Ponding Content of organic matter Flooding	1.00 1.00 1.00 1.00 0.80	Very limited Flooding Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00 1.00
484A: Greenwood-----	Very limited Depth to saturated zone Frost action Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Ponding Cutbanks cave	1.00 1.00 1.00 1.00 0.10	Very limited Depth to saturated zone Ponding	1.00 1.00
Beseman-----	Very limited Depth to saturated zone Frost action Subsidence Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Ponding Content of organic matter Cutbanks cave	1.00 1.00 1.00 1.00 0.10	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00

Table 18b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
495B:						
Karlsborg-----	Somewhat limited		Very limited		Somewhat limited	
	Depth to	0.75	Depth to	1.00	Depth to	0.75
	saturated zone		saturated zone		saturated zone	
	Frost action	0.50	Too clayey	1.00	Droughty	0.26
			Cutbanks cave	1.00		
Gretttum-----	Not limited		Very limited		Somewhat limited	
			Cutbanks cave	1.00	Droughty	0.61
			Depth to	0.35		
			saturated zone			
Perida-----	Somewhat limited		Very limited		Somewhat limited	
	Frost action	0.50	Cutbanks cave	1.00	Droughty	0.44
			Too clayey	1.00		
			Depth to	0.82		
			saturated zone			
495C:						
Karlsborg-----	Somewhat limited		Very limited		Somewhat limited	
	Depth to	0.75	Depth to	1.00	Depth to	0.75
	saturated zone		saturated zone		saturated zone	
	Frost action	0.50	Too clayey	1.00	Droughty	0.26
	Slope	0.04	Cutbanks cave	1.00	Slope	0.04
			Slope	0.04		
Gretttum-----	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.04	Cutbanks cave	1.00	Droughty	0.61
			Depth to	0.35	Slope	0.04
			saturated zone			
			Slope	0.04		
Perida-----	Somewhat limited		Very limited		Somewhat limited	
	Frost action	0.50	Cutbanks cave	1.00	Droughty	0.44
	Slope	0.04	Too clayey	1.00	Slope	0.04
			Depth to	0.82		
			saturated zone			
			Slope	0.04		
495D:						
Karlsborg-----	Very limited		Very limited		Very limited	
	Slope	1.00	Depth to	1.00	Slope	1.00
	Depth to	0.75	saturated zone		Depth to	0.75
	saturated zone		Too clayey	1.00	saturated zone	
	Frost action	0.50	Cutbanks cave	1.00	Droughty	0.26
			Slope	1.00		
Gretttum-----	Very limited		Very limited		Very limited	
	Slope	1.00	Cutbanks cave	1.00	Slope	1.00
			Slope	1.00	Droughty	0.61
			Depth to	0.35		
			saturated zone			
Perida-----	Very limited		Very limited		Very limited	
	Slope	1.00	Cutbanks cave	1.00	Slope	1.00
	Frost action	0.50	Slope	1.00	Droughty	0.44
			Too clayey	1.00		
			Depth to	0.82		
			saturated zone			

Table 18b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
497A: Meenon-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	0.50	Too clayey	1.00	Droughty	0.41
			Cutbanks cave	1.00		
515A: Manitowish-----	Not limited		Very limited		Somewhat limited	
			Cutbanks cave	1.00	Droughty	0.17
			Depth to saturated zone	0.99	Content of large stones	0.01
521A: Dody-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	1.00	Cutbanks cave	1.00	Ponding	1.00
	Low strength	1.00	Too clayey	1.00		
	Shrink-swell	1.00	Ponding	1.00		
	Ponding	1.00				
524E: Rock outcrop-----	Not rated		Not rated		Not rated	
Frogcreek-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Frost action	0.50	Cutbanks cave	1.00		
			Dense layer	0.50		
Metonga-----	Very limited		Very limited		Very limited	
	Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
	Frost action	0.50	Slope	1.00	Depth to bedrock	0.42
	Depth to hard bedrock	0.42	Cutbanks cave	0.10	Content of large stones	0.03
542B: Haugen, very stony--	Somewhat limited		Very limited		Somewhat limited	
	Frost action	0.50	Depth to saturated zone	1.00	Depth to saturated zone	0.19
	Depth to saturated zone	0.19	Cutbanks cave	1.00	Content of large stones	0.03
Haugen-----	Somewhat limited		Very limited		Somewhat limited	
	Frost action	0.50	Depth to saturated zone	1.00	Depth to saturated zone	0.19
	Depth to saturated zone	0.19	Cutbanks cave	1.00	Content of large stones	0.03
542C: Haugen, very stony--	Somewhat limited		Very limited		Somewhat limited	
	Frost action	0.50	Depth to saturated zone	1.00	Depth to saturated zone	0.19
	Depth to saturated zone	0.19	Cutbanks cave	1.00	Slope	0.04
	Slope	0.04	Slope	0.04	Content of large stones	0.03

Table 18b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
542C: Haugen-----	Somewhat limited Frost action Depth to saturated zone Slope	0.50 0.19  0.04	Very limited Depth to saturated zone Cutbanks cave Slope	1.00  1.00 0.04	Somewhat limited Depth to saturated zone Slope Content of large stones	0.19  0.04 0.03
543B: Anigon-----	Somewhat limited Frost action Low strength	0.50  0.22	Very limited Cutbanks cave	1.00	Not limited	
543C2: Anigon-----	Somewhat limited Frost action Low strength Slope	0.50  0.22 0.04	Very limited Cutbanks cave Slope	1.00 0.04	Somewhat limited Slope	0.04
544F: Menahga-----	Very limited Slope	1.00	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Droughty	1.00 0.51
Mahtomedi-----	Very limited Slope	1.00	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Droughty	1.00 1.00
555A: Fordum-----	Very limited Depth to saturated zone Frost action Flooding Ponding	1.00  1.00 1.00 1.00	Very limited Depth to saturated zone Cutbanks cave Ponding Flooding	1.00  1.00 1.00 0.80	Very limited Flooding Depth to saturated zone Ponding	1.00 1.00  1.00
574B: Sayner-----	Not limited		Very limited Cutbanks cave	1.00	Somewhat limited Droughty Content of large stones	0.94 0.01
574C: Sayner-----	Somewhat limited Slope	0.37	Very limited Cutbanks cave Slope	1.00 0.37	Somewhat limited Droughty Slope Content of large stones	0.94 0.37 0.01
574E: Sayner-----	Very limited Slope	1.00	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Droughty Content of large stones	1.00 0.94 0.01



Table 18b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
579B: Parkfalls-----	Very limited Depth to saturated zone Frost action	1.00  1.00	Very limited Depth to saturated zone Cutbanks cave Dense layer	1.00  1.00 0.50	Very limited Depth to saturated zone Content of large stones	1.00  0.01
600A: Haplosaprists-----	Not rated		Not rated		Not rated	
Psammaquents-----	Not rated		Not rated		Not rated	
615B: Cress-----	Not limited		Very limited Cutbanks cave	1.00	Somewhat limited Droughty	0.13
615C: Cress-----	Somewhat limited Slope	0.04	Very limited Cutbanks cave Slope	1.00 0.04	Somewhat limited Droughty Slope	0.13 0.04
615D: Cress-----	Very limited Slope	1.00	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope Droughty	1.00 0.13
623A: Capitola-----	Very limited Depth to saturated zone Frost action Ponding	1.00  1.00 1.00	Very limited Depth to saturated zone Ponding Dense layer Cutbanks cave	1.00  1.00 0.50 0.10	Very limited Depth to saturated zone Ponding	1.00  1.00
624A: Ossmer-----	Very limited Depth to saturated zone Frost action	1.00  0.50	Very limited Depth to saturated zone Cutbanks cave	1.00  1.00	Very limited Depth to saturated zone	1.00
632A: Aftad-----	Somewhat limited Frost action Depth to saturated zone	0.50  0.19	Very limited Depth to saturated zone Cutbanks cave	1.00  1.00	Somewhat limited Depth to saturated zone	0.19
632B: Aftad-----	Somewhat limited Frost action Depth to saturated zone	0.50  0.19	Very limited Depth to saturated zone Cutbanks cave	1.00  1.00	Somewhat limited Depth to saturated zone	0.19
632C: Aftad-----	Somewhat limited Frost action Depth to saturated zone Slope	0.50  0.19 0.04	Very limited Depth to saturated zone Cutbanks cave Slope	1.00  1.00 0.04	Somewhat limited Depth to saturated zone Slope	0.19  0.04

Table 18b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
633F: Pence-----	Very limited Slope	1.00	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Droughty Content of large stones	1.00 0.30 0.01
Padus-----	Very limited Slope Frost action	1.00 0.50	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope	1.00
648B: Sconsin-----	Somewhat limited Depth to saturated zone Frost action	0.75 0.50	Very limited Depth to saturated zone Cutbanks cave Dense layer	1.00 1.00 0.50	Somewhat limited Depth to saturated zone	0.75
670C: Keweenaw-----	Somewhat limited Slope	0.37	Very limited Cutbanks cave Slope	1.00 0.37	Somewhat limited Slope Droughty Content of large stones	0.37 0.05 0.01
Pence-----	Somewhat limited Slope	0.37	Very limited Cutbanks cave Slope	1.00 0.37	Somewhat limited Slope Droughty Content of large stones	0.37 0.30 0.05
670E: Keweenaw-----	Very limited Slope	1.00	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Droughty Content of large stones	1.00 0.05 0.01
Pence-----	Very limited Slope	1.00	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Droughty Content of large stones	1.00 0.30 0.05
671B: Spoonerhill, stony--	Somewhat limited Depth to saturated zone	0.19	Very limited Depth to saturated zone Cutbanks cave Dense layer	1.00 1.00 0.50	Somewhat limited Droughty Depth to saturated zone Content of large stones	0.42 0.19 0.05
Spoonerhill-----	Somewhat limited Depth to saturated zone	0.19	Very limited Depth to saturated zone Cutbanks cave Dense layer	1.00 1.00 0.50	Somewhat limited Droughty Depth to saturnated zone Content of large stones	0.42 0.19 0.01

Table 18b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
680B: Stanberry, stony----	Somewhat limited Frost action Depth to saturated zone	0.50 0.19	Very limited Depth to saturated zone Cutbanks cave Dense layer	1.00 1.00 0.50	Somewhat limited Depth to saturated zone Content of large stones	0.19 0.01
Pence, stony-----	Not limited		Very limited Cutbanks cave	1.00	Somewhat limited Droughty Content of large stones	0.30 0.01
683A: Tipler-----	Somewhat limited Frost action	0.50	Very limited Cutbanks cave Depth to saturated zone	1.00 0.99	Not limited	
706A: Winterfield-----	Very limited Depth to saturated zone Flooding	1.00 1.00	Very limited Depth to saturated zone Cutbanks cave Flooding	1.00 1.00 0.80	Very limited Flooding Depth to saturated zone Droughty	1.00 1.00 0.10
Totagatic-----	Very limited Depth to saturated zone Flooding Ponding Frost action	1.00 1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave Ponding Flooding	1.00 1.00 1.00 1.00 0.80	Very limited Flooding Depth to saturated zone Ponding Droughty	1.00 1.00 1.00 0.37
724A: Rib-----	Very limited Depth to saturated zone Frost action Low strength Ponding Shrink-swell	1.00 1.00 1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
Rock outcrop-----	Not rated		Not rated		Not rated	
726B: Sissabagama-----	Not limited		Very limited Cutbanks cave Depth to saturated zone	1.00 0.99	Somewhat limited Droughty	0.42
733A: Wozny-----	Very limited Depth to saturated zone Frost action Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Cutbanks cave Ponding Dense layer	1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Ponding	1.00 1.00

Table 18b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
771A: Lenroot-----	Somewhat limited Depth to saturated zone	0.19	Very limited Depth to saturated zone Cutbanks cave	1.00 1.00	Somewhat limited Droughty Depth to saturated zone	0.99 0.19
827A: Scoba-----	Somewhat limited Frost action Depth to saturated zone	0.50 0.19	Very limited Depth to saturated zone Cutbanks cave	1.00 1.00	Somewhat limited Depth to saturated zone	0.19
853C: Frogcreek-----	Very limited Depth to saturated zone Frost action	1.00 0.50	Very limited Depth to saturated zone Cutbanks cave Dense layer	1.00 1.00 0.50	Very limited Depth to saturated zone	1.00
Stinnett-----	Very limited Depth to saturated zone Frost action	1.00 0.50	Very limited Depth to saturated zone Cutbanks cave Dense layer	1.00 1.00 0.50	Very limited Depth to saturated zone	1.00
Wozny-----	Very limited Depth to saturated zone Frost action Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Cutbanks cave Ponding Dense layer	1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Ponding	1.00 1.00
856B: Stinnett-----	Very limited Depth to saturated zone Frost action	1.00 0.50	Very limited Depth to saturated zone Cutbanks cave Dense layer	1.00 1.00 0.50	Very limited Depth to saturated zone	1.00
857B: Frogcreek-----	Very limited Depth to saturated zone Frost action	1.00 0.50	Very limited Depth to saturated zone Cutbanks cave Dense layer	1.00 1.00 0.50	Very limited Depth to saturated zone	1.00
857C: Frogcreek-----	Very limited Depth to saturated zone Frost action Slope	1.00 0.50 0.16	Very limited Depth to saturated zone Cutbanks cave Dense layer Slope	1.00 1.00 0.50 0.16	Very limited Depth to saturated zone Slope	1.00 0.16
873B: Stanberry-----	Somewhat limited Frost action Depth to saturated zone	0.50 0.19	Very limited Depth to saturated zone Cutbanks cave Dense layer	1.00 1.00 0.50	Somewhat limited Depth to saturated zone Content of large stones	0.19 0.01

Table 18b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
873C: Stanberry-----	Somewhat limited		Very limited		Somewhat limited	
	Frost action	0.50	Depth to	1.00	Slope	0.37
	Slope	0.37	saturated zone		Depth to	0.19
	Depth to	0.19	Cutbanks cave	1.00	saturated zone	
	saturated zone		Dense layer	0.50	Content of large	0.01
			Slope	0.37	stones	
873D: Stanberry-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Frost action	0.50	Depth to	1.00	Depth to	0.19
	Depth to	0.19	saturated zone		saturated zone	
	saturated zone		Cutbanks cave	1.00	Content of large	0.01
			Dense layer	0.50	stones	
905A: Cublake-----	Not limited		Very limited		Somewhat limited	
			Cutbanks cave	1.00	Droughty	0.61
			Depth to	0.99		
			saturated zone			
926A: Flink-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Frost action	0.50	Cutbanks cave	1.00	Droughty	0.64
943D: Stanberry-----	Very limited		Very limited		Very limited	
	Slope	1.00	Depth to	1.00	Slope	1.00
	Frost action	0.50	saturated zone		Depth to	0.19
	Depth to	0.19	Cutbanks cave	1.00	saturated zone	
	saturated zone		Slope	1.00	Content of large	0.01
			Dense layer	0.50	stones	
Greenwood-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Frost action	1.00	Content of	1.00	Ponding	1.00
	Ponding	1.00	organic matter			
			Ponding	1.00		
			Cutbanks cave	0.10		
948A: Billyboy-----	Somewhat limited		Very limited		Somewhat limited	
	Depth to	0.75	Depth to	1.00	Depth to	0.75
	saturated zone		saturated zone		saturated zone	
	Frost action	0.50	Cutbanks cave	1.00		
970C: Keweenaw-----	Somewhat limited		Very limited		Somewhat limited	
	Slope	0.37	Cutbanks cave	1.00	Slope	0.37
			Slope	0.37	Droughty	0.05
					Content of large	0.01
					stones	

Table 18b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
970C:						
Pence-----	Somewhat limited Slope	0.37	Very limited Cutbanks cave Slope	1.00 0.37	Somewhat limited Slope Droughty Content of large stones	0.37 0.30 0.01
Greenwood-----	Very limited Depth to saturated zone Frost action Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Ponding Cutbanks cave	1.00 1.00 1.00 0.10	Not rated	
970E:						
Keweenaw-----	Very limited Slope	1.00	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Droughty Content of large stones	1.00 0.05 0.01
Pence-----	Very limited Slope	1.00	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Droughty Content of large stones	1.00 0.30 0.01
Greenwood-----	Very limited Depth to saturated zone Frost action Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Ponding Cutbanks cave	1.00 1.00 1.00 0.10	Not rated	
1070C:						
Fremstadt-----	Somewhat limited Slope	0.16	Very limited Cutbanks cave Slope	1.00 0.16	Somewhat limited Slope Droughty	0.16 0.01
Cress-----	Somewhat limited Slope	0.04	Very limited Cutbanks cave Slope	1.00 0.04	Somewhat limited Droughty Slope	0.13 0.04
1070D:						
Fremstadt-----	Very limited Slope	1.00	Very limited Slope Cutbanks cave	1.00 1.00	Very limited Slope Droughty	1.00 0.01
Cress-----	Very limited Slope	1.00	Very limited Cutbanks cave Slope	1.00 1.00	Very limited Slope Droughty	1.00 0.13
1080B:						
Spoonerhill-----	Somewhat limited Depth to saturated zone	0.19	Very limited Depth to saturated zone Cutbanks cave Dense layer	1.00 1.00 0.50	Somewhat limited Droughty Depth to saturated zone Content of large stones	0.42 0.19 0.01

Table 18b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1080B: Spoonershill, stony--	Somewhat limited Depth to saturated zone	0.19	Very limited Depth to saturated zone Cutbanks cave Dense layer	1.00 1.00 0.50	Somewhat limited Droughty Depth to saturated zone Content of large stones	0.42 0.19 0.05
Cress-----	Not limited		Very limited Cutbanks cave	1.00	Somewhat limited Droughty	0.13
1653C: Stanberry-----	Somewhat limited Frost action Depth to saturated zone Slope	0.50 0.19 0.04	Very limited Depth to saturated zone Cutbanks cave Dense layer Slope	1.00 1.00 0.50 0.04	Somewhat limited Depth to saturated zone Slope Content of large stones	0.19 0.04 0.01
Parkfalls-----	Very limited Depth to saturated zone Frost action	1.00 1.00	Very limited Depth to saturated zone Cutbanks cave Dense layer	1.00 1.00 0.50	Very limited Depth to saturated zone Content of large stones	1.00 0.01
Wozny-----	Very limited Depth to saturated zone Frost action Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Cutbanks cave Ponding Dense layer	1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Ponding	1.00 1.00
2015: Pits-----	Not rated		Not rated		Not rated	
2050: Landfill-----	Not rated		Not rated		Not rated	
3011A: Barronett-----	Very limited Depth to saturated zone Frost action Low strength Ponding Shrink-swell	1.00 1.00 1.00 1.00 0.50	Very limited Depth to saturated zone Cutbanks cave Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
3125A: Meehan-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Cutbanks cave	1.00 1.00	Very limited Depth to saturated zone Droughty	1.00 0.88
3126A: Wurtsmith-----	Somewhat limited Depth to saturated zone	0.19	Very limited Depth to saturated zone Cutbanks cave	1.00 1.00	Somewhat limited Droughty Depth to saturated zone	0.83 0.19

Table 18b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3276A: Au Gres-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Cutbanks cave	1.00 1.00	Very limited Depth to saturated zone Droughty	1.00 0.09
3312B: Glendenning, very stony-----	Very limited Depth to saturated zone Frost action	1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Very limited Depth to saturated zone Content of large stones	1.00 0.03
Glendenning-----	Very limited Depth to saturated zone Frost action	1.00 0.50	Very limited Depth to saturated zone Cutbanks cave	1.00 0.10	Very limited Depth to saturated zone Content of large stones	1.00 0.01
3336A: Fenander-----	Very limited Depth to saturated zone Frost action Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Cutbanks cave Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
3403A: Loxley-----	Very limited Depth to saturated zone Subsidence Frost action Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Ponding Cutbanks cave	1.00 1.00 1.00 1.00 0.10	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00
Beseman-----	Very limited Depth to saturated zone Frost action Subsidence Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Ponding Content of organic matter Cutbanks cave	1.00 1.00 1.00 1.00 0.10	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00
Dawson-----	Very limited Depth to saturated zone Subsidence Frost action Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Cutbanks cave Ponding Content of organic matter	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
3424C: Frogcreek-----	Very limited Depth to saturated zone Frost action	1.00 0.50	Very limited Depth to saturated zone Cutbanks cave Dense layer	1.00 1.00 0.50	Very limited Depth to saturated zone	1.00



Table 18b.--Building Site Development--Continued

Map symbol and soil name	Local roads and streets		Shallow excavations		Lawns and landscaping	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3424C: Magroc-----	Very limited Depth to saturated zone Frost action	1.00  0.50	Very limited Depth to saturated zone Cutbanks cave Dense layer Depth to hard bedrock	1.00  1.00 0.50 0.42	Very limited Depth to saturated zone Content of large stones	1.00  0.03
Stinnett-----	Very limited Depth to saturated zone Frost action	1.00  0.50	Very limited Depth to saturated zone Cutbanks cave Dense layer	1.00  1.00 0.50	Very limited Depth to saturated zone	1.00
Rock outcrop-----	Not rated		Not rated		Not rated	
3446A: Newson-----	Very limited Depth to saturated zone Ponding Frost action	1.00  1.00 0.50	Very limited Depth to saturated zone Cutbanks cave Ponding	1.00  1.00 1.00	Very limited Depth to saturated zone Ponding	1.00  1.00
3448B: Gretttum-----	Not limited		Very limited Cutbanks cave Depth to saturated zone	1.00 0.35	Somewhat limited Droughty	0.61
3448C: Gretttum-----	Somewhat limited Slope	0.04	Very limited Cutbanks cave Depth to saturated zone Slope	1.00 0.35 0.04	Somewhat limited Droughty Slope	0.61 0.04
3516A: Slimlake-----	Not limited		Very limited Cutbanks cave Depth to saturated zone	1.00 0.99	Somewhat limited Droughty	0.21
3629B: Perida-----	Somewhat limited Frost action	0.50	Very limited Cutbanks cave Too clayey Depth to saturated zone	1.00 1.00 0.82	Somewhat limited Droughty	0.44
M-W: Miscellaneous water	Not rated		Not rated		Not rated	
W: Water-----	Not rated		Not rated		Not rated	

Table 19a.--Sanitary Facilities

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. "Not rated" indicates that data are not available or that no rating is applicable. See text for further explanation of ratings in this table)

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
3A:				
Totagatic-----	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Seepage	1.00
	Filtering capacity	1.00	Depth to saturated zone	1.00
	Subsidence	1.00	Ponding	1.00
	Seepage	1.00	Content of organic matter	1.00
Bowstring-----	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Seepage	1.00
	Filtering capacity	1.00	Depth to saturated zone	1.00
	Subsidence	1.00	Ponding	1.00
	Seepage	1.00	Content of organic matter	1.00
Ausable-----	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Seepage	1.00
	Filtering capacity	1.00	Depth to saturated zone	1.00
	Subsidence	1.00	Ponding	1.00
	Seepage	1.00	Content of organic matter	1.00
22A:				
Comstock-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	1.00	Seepage	0.53
24A:				
Poskin-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Filtering capacity	1.00	Depth to saturated zone	1.00
	Seepage	1.00		
	Restricted permeability	0.46		

Table 19a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
27A: Scott Lake-----	Very limited		Very limited	
	Depth to	1.00	Seepage	1.00
	saturated zone		Depth to	1.00
	Filtering	1.00	saturated zone	
	capacity			
	Seepage	1.00		
	Restricted	0.46		
	permeability			
28B: Haugen, very stony--	Very limited		Somewhat limited	
	Depth to	1.00	Depth to	0.75
	saturated zone		saturated zone	
	Restricted	1.00	Seepage	0.53
	permeability		Slope	0.32
Haugen-----	Very limited		Somewhat limited	
	Depth to	1.00	Depth to	0.75
	saturated zone		saturated zone	
	Restricted	1.00	Seepage	0.53
	permeability		Slope	0.32
Rosholt, very stony	Very limited		Very limited	
	Filtering	1.00	Seepage	1.00
	capacity		Slope	0.32
	Seepage	1.00		
	Restricted	0.46		
	permeability			
Rosholt-----	Very limited		Very limited	
	Filtering	1.00	Seepage	1.00
	capacity		Slope	0.32
	Seepage	1.00		
	Restricted	0.46		
	permeability			
28C: Haugen, very stony--	Very limited		Very limited	
	Depth to	1.00	Slope	1.00
	saturated zone		Depth to	0.75
	Restricted	1.00	saturated zone	
	permeability		Seepage	0.53
	Slope	0.04		
Haugen-----	Very limited		Very limited	
	Depth to	1.00	Slope	1.00
	saturated zone		Depth to	0.75
	Restricted	1.00	saturated zone	
	permeability		Seepage	0.53
	Slope	0.04		
Rosholt, very stony	Very limited		Very limited	
	Filtering	1.00	Seepage	1.00
	capacity		Slope	1.00
	Seepage	1.00		
	Restricted	0.46		
	permeability			
	Slope	0.04		

Table 19a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
28C: Rosholt-----	Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00
	Seepage	1.00	Slope	1.00
	Restricted permeability	0.46		
	Slope	0.04		
33B: Chetek-----	Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00
	Seepage	1.00	Slope	0.32
33C: Chetek-----	Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00
	Seepage	1.00	Slope	1.00
	Slope	0.04		
38A: Rosholt-----	Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00
	Seepage	1.00		
	Restricted permeability	0.46		
38B: Rosholt-----	Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00
	Seepage	1.00	Slope	0.32
	Restricted permeability	0.46		
38C: Rosholt-----	Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00
	Seepage	1.00	Slope	1.00
	Restricted permeability	0.46		
	Slope	0.04		
38D: Rosholt-----	Very limited		Very limited	
	Filtering capacity	1.00	Slope	1.00
	Seepage	1.00	Seepage	1.00
	Slope	1.00		
	Restricted permeability	0.46		
42D: Amery-----	Very limited		Very limited	
	Restricted permeability	1.00	Slope	1.00
	Slope	1.00	Seepage	0.53

Table 19a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
43B: Antigo-----	Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00
	Seepage	1.00	Slope	0.32
	Restricted permeability	0.46		
43C: Antigo-----	Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00
	Seepage	1.00	Slope	1.00
	Restricted permeability	0.46		
	Slope	0.37		
43D: Antigo-----	Very limited		Very limited	
	Filtering capacity	1.00	Slope	1.00
	Slope	1.00	Seepage	1.00
	Seepage	1.00		
	Restricted permeability	0.46		
48A: Brill-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Filtering capacity	1.00	Depth to saturated zone	0.99
	Seepage	1.00		
	Restricted permeability	0.46		
63A: Crystal Lake-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	1.00	Seepage	0.53
63B: Crystal Lake-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	1.00	Seepage	0.53
			Slope	0.32
63C: Crystal Lake-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Slope	1.00
	Restricted permeability	1.00	Depth to saturated zone	0.99
	Slope	0.04	Seepage	0.53

Table 19a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
63E:				
Crystal Lake-----	Very limited		Very limited	
	Depth to	1.00	Slope	1.00
	saturated zone		Seepage	0.53
	Slope	1.00	Depth to	0.19
	Restricted	1.00	saturated zone	
	permeability			
64A:				
Totagatic-----	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to	1.00	Seepage	1.00
	saturated zone		Depth to	1.00
	Filtering	1.00	saturated zone	
	capacity		Ponding	1.00
	Subsidence	1.00	Content of	1.00
	Seepage	1.00	organic matter	
Winterfield-----	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to	1.00	Seepage	1.00
	saturated zone		Depth to	1.00
	Filtering	1.00	saturated zone	
	capacity			
	Seepage	1.00		
69B:				
Keweenaw-----	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
			Slope	0.32
Sayner-----	Very limited		Very limited	
	Filtering	1.00	Seepage	1.00
	capacity		Slope	0.32
	Seepage	1.00		
Vilas-----	Very limited		Very limited	
	Filtering	1.00	Seepage	1.00
	capacity		Slope	0.32
	Seepage	1.00		
69C:				
Keweenaw-----	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
	Slope	0.16	Slope	1.00
Sayner-----	Very limited		Very limited	
	Filtering	1.00	Seepage	1.00
	capacity		Slope	1.00
	Seepage	1.00		
	Slope	0.16		
Vilas-----	Very limited		Very limited	
	Filtering	1.00	Seepage	1.00
	capacity		Slope	1.00
	Seepage	1.00		
	Slope	0.16		

Table 19a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
69E:				
Keweenaw-----	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Seepage	1.00	Seepage	1.00
Sayner-----	Very limited		Very limited	
	Filtering capacity	1.00	Slope	1.00
	Slope	1.00	Seepage	1.00
	Seepage	1.00		
Vilas-----	Very limited		Very limited	
	Filtering capacity	1.00	Slope	1.00
	Slope	1.00	Seepage	1.00
	Seepage	1.00		
74B:				
Vilas-----	Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00
	Seepage	1.00	Slope	0.08
74C:				
Vilas-----	Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00
	Seepage	1.00	Slope	1.00
	Slope	0.37		
74D:				
Vilas-----	Very limited		Very limited	
	Filtering capacity	1.00	Slope	1.00
	Slope	1.00	Seepage	1.00
	Seepage	1.00		
100B:				
Menahga-----	Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00
	Seepage	1.00	Slope	0.08
100C:				
Menahga-----	Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00
	Seepage	1.00	Slope	1.00
	Slope	0.04		
100D:				
Menahga-----	Very limited		Very limited	
	Filtering capacity	1.00	Slope	1.00
	Seepage	1.00	Seepage	1.00
	Slope	1.00		

Table 19a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
127D:				
Amery-----	Very limited		Very limited	
	Restricted	1.00	Slope	1.00
	permeability		Seepage	0.53
	Slope	1.00		
Rosholt-----	Very limited		Very limited	
	Filtering	1.00	Slope	1.00
	capacity		Seepage	1.00
	Seepage	1.00		
	Slope	1.00		
	Restricted	0.46		
	permeability			
127E:				
Amery-----	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Restricted	1.00	Seepage	0.53
	permeability			
Rosholt-----	Very limited		Very limited	
	Filtering	1.00	Slope	1.00
	capacity		Seepage	1.00
	Slope	1.00		
	Seepage	1.00		
	Restricted	0.46		
	permeability			
156B:				
Magnor, very stony--	Very limited		Very limited	
	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone	
	Restricted	1.00	Seepage	0.53
	permeability			
Magnor-----	Very limited		Very limited	
	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone	
	Restricted	1.00	Seepage	0.53
	permeability			
157B:				
Freeon, very stony--	Very limited		Very limited	
	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone	
	Restricted	1.00	Seepage	0.53
	permeability		Slope	0.32
Freeon-----	Very limited		Very limited	
	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone	
	Restricted	1.00	Seepage	0.53
	permeability		Slope	0.32
157C:				
Freeon, very stony--	Very limited		Very limited	
	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone	
	Restricted	1.00	Slope	1.00
	permeability		Seepage	0.53
	Slope	0.04		



Table 19a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
157C: Freeon-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	1.00	Slope	1.00
	Slope	0.04	Seepage	0.53
160A: Oesterle-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Filtering capacity	1.00	Depth to saturated zone	1.00
	Seepage	1.00		
182B: Padus-----	Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00
	Seepage	1.00	Slope	0.08
	Restricted permeability	0.46		
182C: Padus-----	Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00
	Seepage	1.00	Slope	1.00
	Restricted permeability	0.46		
	Slope	0.37		
192A: Worcester-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Filtering capacity	1.00	Depth to saturated zone	1.00
	Seepage	1.00		
	Restricted permeability	0.46		
193A: Minocqua-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Filtering capacity	1.00	Depth to saturated zone	1.00
	Seepage	1.00	Ponding	1.00
	Ponding	1.00	Content of organic matter	1.00
	Restricted permeability	0.46		
215B: Pence-----	Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00
	Seepage	1.00	Slope	0.08

Table 19a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
215C: Pence-----	Very limited		Very limited	
	Filtering	1.00	Seepage	1.00
	capacity		Slope	1.00
	Seepage	1.00		
	Slope	0.37		
215D: Pence-----	Very limited		Very limited	
	Filtering	1.00	Slope	1.00
	capacity		Seepage	1.00
	Slope	1.00		
	Seepage	1.00		
315A: Rib-----	Very limited		Very limited	
	Depth to	1.00	Seepage	1.00
	saturated zone		Depth to	1.00
	Filtering	1.00	saturated zone	
	capacity		Ponding	1.00
	Seepage	1.00		
	Ponding	1.00		
	Restricted	0.46		
	permeability			
337A: Plover-----	Very limited		Very limited	
	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone	
	Restricted	1.00	Seepage	0.53
	permeability			
368B: Mahtomedi-----	Very limited		Very limited	
	Filtering	1.00	Seepage	1.00
	capacity		Slope	0.32
	Seepage	1.00		
Cress-----	Very limited		Very limited	
	Filtering	1.00	Seepage	1.00
	capacity		Slope	0.32
	Seepage	1.00		
368C: Mahtomedi-----	Very limited		Very limited	
	Filtering	1.00	Seepage	1.00
	capacity		Slope	1.00
	Seepage	1.00		
	Slope	0.04		
Cress-----	Very limited		Very limited	
	Filtering	1.00	Seepage	1.00
	capacity		Slope	1.00
	Seepage	1.00		
	Slope	0.04		

Table 19a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields	Sewage lagoons		
	Rating class and limiting features	Value	Rating class and limiting features	Value
368D:				
Mahtomedi-----	Very limited		Very limited	
	Filtering	1.00	Slope	1.00
	capacity		Seepage	1.00
	Seepage	1.00		
	Slope	1.00		
Cress-----	Very limited		Very limited	
	Filtering	1.00	Slope	1.00
	capacity		Seepage	1.00
	Seepage	1.00		
	Slope	1.00		
371A:				
Croswell-----	Very limited		Very limited	
	Depth to	1.00	Seepage	1.00
	saturated zone		Depth to	1.00
	Filtering	1.00	saturated zone	
	capacity			
	Seepage	1.00		
380B:				
Cress-----	Very limited		Very limited	
	Filtering	1.00	Seepage	1.00
	capacity		Slope	0.32
	Seepage	1.00		
Rosholt-----	Very limited		Very limited	
	Filtering	1.00	Seepage	1.00
	capacity		Slope	0.32
	Seepage	1.00		
	Restricted	0.46		
	permeability			
380C:				
Cress-----	Very limited		Very limited	
	Filtering	1.00	Seepage	1.00
	capacity		Slope	1.00
	Seepage	1.00		
	Slope	0.04		
Rosholt-----	Very limited		Very limited	
	Filtering	1.00	Seepage	1.00
	capacity		Slope	1.00
	Seepage	1.00		
	Restricted	0.46		
	permeability			
	Slope	0.04		
380D:				
Cress-----	Very limited		Very limited	
	Filtering	1.00	Slope	1.00
	capacity		Seepage	1.00
	Seepage	1.00		
	Slope	1.00		

Table 19a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
380D: Rosholt-----	Very limited		Very limited	
	Filtering	1.00	Slope	1.00
	capacity		Seepage	1.00
	Seepage	1.00		
	Slope	1.00		
	Restricted	0.46		
	permeability			
383B: Mahtomedi-----	Very limited		Very limited	
	Filtering	1.00	Seepage	1.00
	capacity		Slope	0.08
	Seepage	1.00		
383C: Mahtomedi-----	Very limited		Very limited	
	Filtering	1.00	Seepage	1.00
	capacity		Slope	1.00
	Seepage	1.00		
	Slope	0.04		
383D: Mahtomedi-----	Very limited		Very limited	
	Filtering	1.00	Slope	1.00
	capacity		Seepage	1.00
	Seepage	1.00		
	Slope	1.00		
396B: Friendship-----	Very limited		Very limited	
	Filtering	1.00	Seepage	1.00
	capacity		Depth to	0.17
	Seepage	1.00	saturated zone	
	Depth to	0.84		
	saturated zone			
Wurtsmith-----	Very limited		Very limited	
	Depth to	1.00	Seepage	1.00
	saturated zone		Depth to	1.00
	Filtering	1.00	saturated zone	
	capacity			
	Seepage	1.00		
Grayling-----	Very limited		Very limited	
	Filtering	1.00	Seepage	1.00
	capacity		Slope	0.08
	Seepage	1.00		
397A: Perchlake-----	Very limited		Very limited	
	Depth to	1.00	Seepage	1.00
	saturated zone		Depth to	1.00
	Filtering	1.00	saturated zone	
	capacity			
	Seepage	1.00		

Table 19a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
399B: Grayling-----	Very limited		Very limited	
	Filtering	1.00	Seepage	1.00
	capacity		Slope	0.08
	Seepage	1.00		
399C: Grayling-----	Very limited		Very limited	
	Filtering	1.00	Seepage	1.00
	capacity		Slope	1.00
	Seepage	1.00		
	Slope	0.04		
399D: Grayling-----	Very limited		Very limited	
	Filtering	1.00	Slope	1.00
	capacity		Seepage	1.00
	Seepage	1.00		
	Slope	1.00		
405A: Lupton-----	Very limited		Very limited	
	Depth to	1.00	Content of	1.00
	saturated zone		organic matter	
	Subsidence	1.00	Depth to	1.00
	Seepage	1.00	saturated zone	
	Ponding	1.00	Seepage	1.00
			Ponding	1.00
Cathro-----	Very limited		Very limited	
	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone	
	Ponding	1.00	Seepage	1.00
	Restricted	0.72	Ponding	1.00
	permeability		Content of	1.00
			organic matter	
Tawas-----	Very limited		Very limited	
	Depth to	1.00	Seepage	1.00
	saturated zone		Depth to	1.00
	Filtering	1.00	saturated zone	
	capacity		Ponding	1.00
	Subsidence	1.00	Content of	1.00
	Seepage	1.00	organic matter	
	Ponding	1.00		
406A: Loxley-----	Very limited		Very limited	
	Depth to	1.00	Content of	1.00
	saturated zone		organic matter	
	Filtering	1.00	Seepage	1.00
	capacity		Depth to	1.00
	Subsidence	1.00	saturated zone	
	Seepage	1.00	Ponding	1.00
	Ponding	1.00		

Table 19a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
407A: Seelyeville-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Content of organic matter	1.00
	Seepage	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Seepage	1.00
			Ponding	1.00
Markey-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Filtering capacity	1.00	Depth to saturated zone	1.00
	Seepage	1.00	Ponding	1.00
	Ponding	1.00	Content of organic matter	1.00
	Restricted permeability	0.46		
410A: Seelyeville-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Content of organic matter	1.00
	Seepage	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Seepage	1.00
			Ponding	1.00
Cathro-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Seepage	1.00
	Restricted permeability	0.72	Ponding	1.00
			Content of organic matter	1.00
412A: Rifle-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Content of organic matter	1.00
	Seepage	1.00	Seepage	1.00
	Ponding	1.00	Depth to saturated zone	1.00
			Ponding	1.00
Tacoosh-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Seepage	1.00
	Restricted permeability	0.46	Ponding	1.00
			Content of organic matter	1.00
415A: Greenwood-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Content of organic matter	1.00
	Subsidence	1.00	Depth to saturated zone	1.00
	Seepage	1.00	Seepage	1.00
	Ponding	1.00	Ponding	1.00

Table 19a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
439B:				
Graycalm-----	Very limited		Very limited	
	Filtering	1.00	Seepage	1.00
	capacity		Slope	0.08
	Seepage	1.00		
Menahga-----	Very limited		Very limited	
	Filtering	1.00	Seepage	1.00
	capacity		Slope	0.08
	Seepage	1.00		
439C:				
Graycalm-----	Very limited		Very limited	
	Filtering	1.00	Seepage	1.00
	capacity		Slope	1.00
	Seepage	1.00		
	Slope	0.04		
Menahga-----	Very limited		Very limited	
	Filtering	1.00	Seepage	1.00
	capacity		Slope	1.00
	Seepage	1.00		
	Slope	0.04		
439D:				
Graycalm-----	Very limited		Very limited	
	Filtering	1.00	Slope	1.00
	capacity		Seepage	1.00
	Seepage	1.00		
	Slope	1.00		
Menahga-----	Very limited		Very limited	
	Filtering	1.00	Slope	1.00
	capacity		Seepage	1.00
	Seepage	1.00		
	Slope	1.00		
441C:				
Freeon-----	Very limited		Very limited	
	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone	
	Restricted	1.00	Slope	1.00
	permeability		Seepage	0.53
	Slope	0.37		
Cathro-----	Very limited		Very limited	
	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone	
	Ponding	1.00	Seepage	1.00
	Restricted	0.72	Ponding	1.00
	permeability		Content of	1.00
			organic matter	
442C:				
Haugen-----	Very limited		Very limited	
	Depth to	1.00	Slope	1.00
	saturated zone		Depth to	0.75
	Restricted	1.00	saturated zone	
	permeability		Seepage	0.53

Table 19a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
442C: Greenwood-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Content of organic matter	1.00
	Filtering capacity	1.00	Depth to saturated zone	1.00
	Seepage	1.00	Seepage	1.00
	Ponding	1.00	Ponding	1.00
443D: Amery-----	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Restricted permeability	1.00	Seepage	0.53
Greenwood-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Content of organic matter	1.00
	Filtering capacity	1.00	Depth to saturated zone	1.00
	Seepage	1.00	Seepage	1.00
	Ponding	1.00	Ponding	1.00
461A: Bowstring-----	Very limited		Very limited	
	Flooding	1.00	Flooding	1.00
	Depth to saturated zone	1.00	Seepage	1.00
	Filtering capacity	1.00	Depth to saturated zone	1.00
	Subsidence	1.00	Ponding	1.00
	Seepage	1.00	Content of organic matter	1.00
484A: Greenwood-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Content of organic matter	1.00
	Filtering capacity	1.00	Depth to saturated zone	1.00
	Seepage	1.00	Seepage	1.00
	Ponding	1.00	Ponding	1.00
Beseman-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	1.00	Seepage	1.00
	Subsidence	1.00	Ponding	1.00
	Ponding	1.00	Content of organic matter	1.00
495B: Karlsborg-----	Very limited		Very limited	
	Restricted permeability	1.00	Seepage	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	0.99
	Filtering capacity	1.00	Slope	0.32
	Seepage	1.00		



Table 19a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
495B:				
Grettum-----	Very limited		Very limited	
	Filtering	1.00	Seepage	1.00
	capacity		Slope	0.32
	Seepage	1.00	Depth to	0.17
	Depth to	0.84	saturated zone	
	saturated zone			
Perida-----	Very limited		Very limited	
	Restricted	1.00	Seepage	1.00
	permeability		Slope	0.32
	Depth to	1.00		
	saturated zone			
	Filtering	1.00		
	capacity			
	Seepage	1.00		
495C:				
Karlsborg-----	Very limited		Very limited	
	Restricted	1.00	Seepage	1.00
	permeability		Slope	1.00
	Depth to	1.00	Depth to	0.99
	saturated zone		saturated zone	
	Filtering	1.00		
	capacity			
	Seepage	1.00		
	Slope	0.04		
Grettum-----	Very limited		Very limited	
	Filtering	1.00	Seepage	1.00
	capacity		Slope	1.00
	Seepage	1.00	Depth to	0.17
	Depth to	0.84	saturated zone	
	saturated zone			
	Slope	0.04		
Perida-----	Very limited		Very limited	
	Restricted	1.00	Seepage	1.00
	permeability		Slope	1.00
	Depth to	1.00		
	saturated zone			
	Filtering	1.00		
	capacity			
	Seepage	1.00		
	Slope	0.04		
495D:				
Karlsborg-----	Very limited		Very limited	
	Restricted	1.00	Slope	1.00
	permeability		Seepage	1.00
	Depth to	1.00	Depth to	0.99
	saturated zone		saturated zone	
	Filtering	1.00		
	capacity			
	Seepage	1.00		
	Slope	1.00		

Table 19a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
495D: Grettum-----	Very limited		Very limited	
	Filtering	1.00	Slope	1.00
	capacity		Seepage	1.00
	Seepage	1.00	Depth to	0.17
	Slope	1.00	saturated zone	
	Depth to	0.84		
	saturated zone			
Perida-----	Very limited		Very limited	
	Restricted	1.00	Slope	1.00
	permeability		Seepage	1.00
	Depth to	1.00		
	saturated zone			
	Filtering	1.00		
	capacity			
	Seepage	1.00		
	Slope	1.00		
497A: Meenon-----	Very limited		Very limited	
	Restricted	1.00	Seepage	1.00
	permeability		Depth to	1.00
	Depth to	1.00	saturated zone	
	saturated zone			
	Filtering	1.00		
	capacity			
	Seepage	1.00		
515A: Manitowish-----	Very limited		Very limited	
	Depth to	1.00	Seepage	1.00
	saturated zone		Depth to	1.00
	Filtering	1.00	saturated zone	
	capacity			
	Seepage	1.00		
521A: Dody-----	Very limited		Very limited	
	Restricted	1.00	Seepage	1.00
	permeability		Depth to	1.00
	Depth to	1.00	saturated zone	
	saturated zone		Ponding	1.00
	Filtering	1.00	Content of	1.00
	capacity		organic matter	
	Seepage	1.00		
	Ponding	1.00		
524E: Rock outcrop-----	Not rated		Not rated	
Frogcreek-----	Very limited		Very limited	
	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone	
	Restricted	1.00	Slope	1.00
	permeability		Seepage	0.53

Table 19a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
524E: Metonga-----	Very limited		Very limited	
	Depth to bedrock	1.00	Depth to hard	1.00
	Slope	1.00	bedrock	
	Restricted	0.46	Slope	1.00
	permeability		Seepage	1.00
542B: Haugen, very stony--	Very limited		Somewhat limited	
	Depth to	1.00	Depth to	0.75
	saturated zone		saturated zone	
	Restricted	1.00	Seepage	0.53
	permeability		Slope	0.32
Haugen-----	Very limited		Somewhat limited	
	Depth to	1.00	Depth to	0.75
	saturated zone		saturated zone	
	Restricted	1.00	Seepage	0.53
	permeability		Slope	0.32
542C: Haugen, very stony--	Very limited		Very limited	
	Depth to	1.00	Slope	1.00
	saturated zone		Depth to	0.75
	Restricted	1.00	saturated zone	
	permeability		Seepage	0.53
	Slope	0.04		
Haugen-----	Very limited		Very limited	
	Depth to	1.00	Slope	1.00
	saturated zone		Depth to	0.75
	Restricted	1.00	saturated zone	
	permeability		Seepage	0.53
	Slope	0.04		
543B: Anigon-----	Very limited		Very limited	
	Filtering	1.00	Seepage	1.00
	capacity		Slope	0.32
	Seepage	1.00		
	Restricted	0.46		
	permeability			
543C2: Anigon-----	Very limited		Very limited	
	Filtering	1.00	Seepage	1.00
	capacity		Slope	1.00
	Seepage	1.00		
	Restricted	0.46		
	permeability			
	Slope	0.04		
544F: Menahga-----	Very limited		Very limited	
	Filtering	1.00	Slope	1.00
	capacity		Seepage	1.00
	Slope	1.00		
	Seepage	1.00		

Table 19a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
544F: Mahtomedi-----	Very limited Filtering capacity Slope Seepage	1.00 1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00
555A: Fordum-----	Very limited Flooding Depth to saturated zone Filtering capacity Seepage Ponding	1.00 1.00 1.00 1.00 1.00 1.00	Very limited Flooding Seepage Depth to saturated zone Ponding	1.00 1.00 1.00 1.00
574B: Sayner-----	Very limited Filtering capacity Seepage	1.00 1.00	Very limited Seepage Slope	1.00 0.08
574C: Sayner-----	Very limited Filtering capacity Seepage Slope	1.00 1.00 0.37	Very limited Seepage Slope	1.00 1.00
574E: Sayner-----	Very limited Filtering capacity Slope Seepage	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00
579B: Parkfalls-----	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 0.53
600A: Haplosaprists-----	Not rated		Not rated	
Psammaquents-----	Not rated		Not rated	
615B: Cress-----	Very limited Filtering capacity Seepage	1.00 1.00	Very limited Seepage Slope	1.00 0.08
615C: Cress-----	Very limited Filtering capacity Seepage Slope	1.00 1.00 0.04	Very limited Seepage Slope	1.00 1.00

Table 19a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
615D: Cress-----	Very limited Filtering capacity Seepage Slope	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00
623A: Capitola-----	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding Content of organic matter Seepage	1.00 1.00 1.00 0.53
624A: Ossmer-----	Very limited Depth to saturated zone Filtering capacity Seepage Restricted permeability	1.00 1.00 1.00 0.46	Very limited Seepage Depth to saturated zone	1.00 1.00
632A: Aftad-----	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 0.53
632B: Aftad-----	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone Seepage Slope	1.00 0.53 0.32
632C: Aftad-----	Very limited Depth to saturated zone Restricted permeability Slope	1.00 1.00 0.04	Very limited Slope Depth to saturated zone Seepage	1.00 0.99 0.53
633F: Pence-----	Very limited Filtering capacity Slope Seepage	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00

Table 19a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
633F: Padus-----	Very limited		Very limited	
	Filtering	1.00	Slope	1.00
	capacity		Seepage	1.00
	Slope	1.00		
	Seepage	1.00		
	Restricted	0.46		
	permeability			
648B: Sconsin-----	Very limited		Very limited	
	Depth to	1.00	Seepage	1.00
	saturated zone		Depth to	0.99
	Seepage	1.00	saturated zone	
	Restricted	0.46	Slope	0.32
	permeability			
670C: Keweenaw-----	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
	Slope	0.37	Slope	1.00
Pence-----	Very limited		Very limited	
	Filtering	1.00	Seepage	1.00
	capacity		Slope	1.00
	Seepage	1.00		
	Slope	0.37		
670E: Keweenaw-----	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Seepage	1.00	Seepage	1.00
Pence-----	Very limited		Very limited	
	Filtering	1.00	Slope	1.00
	capacity		Seepage	1.00
	Slope	1.00		
	Seepage	1.00		
671B: Spoonerhill, stony--	Very limited		Very limited	
	Depth to	1.00	Seepage	1.00
	saturated zone		Depth to	0.75
	Restricted	1.00	saturated zone	
	permeability		Slope	0.32
Spoonerhill-----	Very limited		Very limited	
	Depth to	1.00	Seepage	1.00
	saturated zone		Depth to	0.75
	Restricted	1.00	saturated zone	
	permeability		Slope	0.32
680B: Stanberry, stony---	Very limited		Somewhat limited	
	Depth to	1.00	Depth to	0.75
	saturated zone		saturated zone	
	Filtering	1.00	Seepage	0.53
	capacity		Slope	0.32
	Restricted	1.00		
	permeability			

Table 19a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
680B: Pence, stony-----	Very limited Filtering capacity Seepage	1.00 1.00	Very limited Seepage Slope	1.00 0.32
683A: Tipler-----	Very limited Depth to saturated zone Filtering capacity Seepage Restricted permeability	1.00 1.00 1.00 0.46	Very limited Seepage Depth to saturated zone	1.00 1.00
706A: Winterfield-----	Very limited Flooding Depth to saturated zone Filtering capacity Seepage	1.00 1.00 1.00 1.00	Very limited Flooding Seepage Depth to saturated zone	1.00 1.00 1.00
Totagatic-----	Very limited Flooding Depth to saturated zone Filtering capacity Seepage Ponding	1.00 1.00 1.00 1.00 1.00	Very limited Flooding Seepage Depth to saturated zone Ponding	1.00 1.00 1.00 1.00
724A: Rib-----	Very limited Depth to saturated zone Filtering capacity Seepage Ponding Restricted permeability	1.00 1.00 1.00 1.00 0.46	Very limited Seepage Depth to saturated zone Ponding	1.00 1.00 1.00
Rock outcrop-----	Not rated		Not rated	
726B: Sissabagama-----	Very limited Depth to saturated zone Filtering capacity Restricted permeability	1.00 1.00 1.00	Very limited Seepage Depth to saturated zone Slope	1.00 1.00 0.08

Table 19a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
733A: Wozny-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00
	Restricted permeability	0.46	Content of organic matter	1.00
			Seepage	0.53
771A: Lenroot-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Filtering capacity	1.00	Depth to saturated zone	1.00
	Seepage	1.00		
827A: Scoba-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Filtering capacity	1.00	Depth to saturated zone	1.00
	Seepage	1.00		
	Restricted permeability	0.46		
853C: Frogcreek-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	1.00	Slope	1.00
			Seepage	0.53
Stinnett-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	1.00	Seepage	0.53
Wozny-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00
	Restricted permeability	0.46	Content of organic matter	1.00
			Seepage	0.53
856B: Stinnett-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	1.00	Seepage	0.53
857B: Frogcreek-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	1.00	Seepage	0.53
			Slope	0.32



Table 19a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
857C: Frogcreek-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	1.00	Slope	1.00
	Slope	0.16	Seepage	0.53
873B: Stanberry-----	Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	0.75
	Filtering capacity	1.00	Seepage	0.53
	Restricted permeability	1.00	Slope	0.32
873C: Stanberry-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Slope	1.00
	Filtering capacity	1.00	Depth to saturated zone	0.75
	Restricted permeability	1.00	Seepage	0.53
	Slope	0.37		
873D: Stanberry-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Slope	1.00
	Filtering capacity	1.00	Depth to saturated zone	0.75
	Slope	1.00	Seepage	0.53
	Restricted permeability	1.00		
905A: Cublake-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Filtering capacity	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.72		
926A: Flink-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Filtering capacity	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.72		

Table 19a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
943D:				
Stanberry-----	Very limited		Very limited	
	Depth to	1.00	Slope	1.00
	saturated zone		Depth to	0.75
	Filtering	1.00	saturated zone	
	capacity		Seepage	0.53
	Restricted	1.00		
	permeability			
	Slope	1.00		
Greenwood-----	Very limited		Very limited	
	Depth to	1.00	Content of	1.00
	saturated zone		organic matter	
	Ponding	1.00	Depth to	1.00
	Restricted	0.46	saturated zone	
	permeability		Ponding	1.00
			Seepage	0.53
948A:				
Billyboy-----	Very limited		Very limited	
	Depth to	1.00	Seepage	1.00
	saturated zone		Depth to	1.00
	Filtering	1.00	saturated zone	
	capacity			
	Seepage	1.00		
	Restricted	0.46		
	permeability			
970C:				
Keweenaw-----	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
	Slope	0.37	Slope	1.00
Pence-----	Very limited		Very limited	
	Filtering	1.00	Seepage	1.00
	capacity		Slope	1.00
	Seepage	1.00		
	Slope	0.37		
Greenwood-----	Very limited		Very limited	
	Depth to	1.00	Content of	1.00
	saturated zone		organic matter	
	Filtering	1.00	Depth to	1.00
	capacity		saturated zone	
	Seepage	1.00	Seepage	1.00
	Ponding	1.00	Ponding	1.00
970E:				
Keweenaw-----	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Seepage	1.00	Seepage	1.00
Pence-----	Very limited		Very limited	
	Filtering	1.00	Slope	1.00
	capacity		Seepage	1.00
	Slope	1.00		
	Seepage	1.00		

Table 19a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
970E: Greenwood-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Content of organic matter	1.00
	Filtering capacity	1.00	Depth to saturated zone	1.00
	Seepage	1.00	Seepage	1.00
	Ponding	1.00	Ponding	1.00
1070C: Fremstadt-----	Very limited		Very limited	
	Seepage	1.00	Seepage	1.00
	Slope	0.16	Slope	1.00
Cress-----	Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00
	Seepage	1.00	Slope	1.00
	Slope	0.04		
1070D: Fremstadt-----	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Seepage	1.00	Seepage	1.00
Cress-----	Very limited		Very limited	
	Filtering capacity	1.00	Slope	1.00
	Seepage	1.00	Seepage	1.00
	Slope	1.00		
1080B: Spoonerhill-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Restricted permeability	1.00	Depth to saturated zone	0.75
			Slope	0.32
Spoonerhill, stony--	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Restricted permeability	1.00	Depth to saturated zone	0.75
			Slope	0.32
Cress-----	Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00
	Seepage	1.00	Slope	0.08
1653C: Stanberry-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Slope	1.00
	Filtering capacity	1.00	Depth to saturated zone	0.75
	Restricted permeability	1.00	Seepage	0.53
	Slope	0.04		

Table 19a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
1653C: Parkfalls-----	Very limited Depth to saturated zone Restricted permeability	1.00  1.00	Very limited Depth to saturated zone Seepage	1.00  0.53
Wozny-----	Very limited Depth to saturated zone Ponding Restricted permeability	1.00  1.00 0.46	Very limited Depth to saturated zone Ponding Content of organic matter Seepage	1.00  1.00 1.00 0.53
2015: Pits-----	Not rated		Not rated	
2050: Landfill-----	Not rated		Not rated	
3011A: Barronett-----	Very limited Depth to saturated zone Restricted permeability Ponding	1.00  1.00  1.00	Very limited Depth to saturated zone Ponding Seepage	1.00  1.00 0.53
3125A: Meehan-----	Very limited Depth to saturated zone Filtering capacity Seepage	1.00  1.00  1.00	Very limited Seepage Depth to saturated zone	1.00  1.00
3126A: Wurtsmith-----	Very limited Depth to saturated zone Filtering capacity Seepage	1.00  1.00  1.00	Very limited Seepage Depth to saturated zone	1.00  1.00
3276A: Au Gres-----	Very limited Depth to saturated zone Filtering capacity Seepage	1.00  1.00  1.00	Very limited Seepage Depth to saturated zone	1.00  1.00
3312B: Glendenning, very stony-----	Very limited Depth to saturated zone Restricted permeability	1.00  1.00	Very limited Depth to saturated zone Seepage	1.00  0.53

Table 19a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
3312B: Glendenning-----	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 0.53
3336A: Fenander-----	Very limited Depth to saturated zone Restricted permeability Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding Seepage	1.00 1.00 0.53
3403A: Loxley-----	Very limited Depth to saturated zone Filtering capacity Subsidence Seepage Ponding	1.00 1.00 1.00 1.00 1.00	Very limited Content of organic matter Seepage Depth to saturated zone Ponding	1.00 1.00 1.00 1.00
Beseman-----	Very limited Depth to saturated zone Restricted permeability Subsidence Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Seepage Ponding Content of organic matter	1.00 1.00 1.00 1.00
Dawson-----	Very limited Depth to saturated zone Filtering capacity Subsidence Seepage Ponding	1.00 1.00 1.00 1.00 1.00	Very limited Seepage Depth to saturated zone Ponding Content of organic matter	1.00 1.00 1.00 1.00
3424C: Frogcreek-----	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Depth to saturated zone Slope Seepage	1.00 1.00 0.53
Magroc-----	Very limited Depth to saturated zone Depth to bedrock Restricted permeability	1.00 0.78 0.50	Very limited Depth to saturated zone Seepage Depth to hard bedrock	1.00 1.00 0.42

Table 19a.--Sanitary Facilities--Continued

Map symbol and soil name	Septic tank absorption fields		Sewage lagoons	
	Rating class and limiting features	Value	Rating class and limiting features	Value
3424C: Stinnett-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	1.00	Seepage	0.53
Rock outcrop.				
3446A: Newson-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Filtering capacity	1.00	Depth to saturated zone	1.00
	Seepage	1.00	Ponding	1.00
	Ponding	1.00	Content of organic matter	1.00
3448B: Grettum-----	Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00
	Seepage	1.00	Depth to saturated zone	0.17
	Depth to saturated zone	0.84	Slope	0.08
3448C: Grettum-----	Very limited		Very limited	
	Filtering capacity	1.00	Seepage	1.00
	Seepage	1.00	Slope	1.00
	Depth to saturated zone	0.84	Depth to saturated zone	0.17
	Slope	0.04		
3516A: Slimlake-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00
	Filtering capacity	1.00	Depth to saturated zone	1.00
	Seepage	1.00		
3629B: Perida-----	Very limited		Very limited	
	Restricted permeability	1.00	Seepage	1.00
	Depth to saturated zone	1.00		
	Filtering capacity	1.00		
	Seepage	1.00		
M-W: Miscellaneous water	Not rated		Not rated	
W: Water-----	Not rated		Not rated	

Table 19b.--Sanitary Facilities

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. "Not rated" indicates that data are not available or that no rating is applicable. See text for further explanation of ratings in this table)

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3A:						
Totagatic-----	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Depth to	1.00
	Depth to	1.00	Depth to	1.00	saturated zone	
	saturated zone		saturated zone		Too sandy	1.00
	Seepage	1.00	Seepage	1.00	Seepage	1.00
	Too sandy	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00				
Bowstring-----	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Depth to	1.00
	Depth to	1.00	Depth to	1.00	saturated zone	
	saturated zone		saturated zone		Content of	1.00
	Content of	1.00	Seepage	1.00	organic matter	
	organic matter		Ponding	1.00	Ponding	1.00
	Seepage	1.00			Seepage	0.16
	Ponding	1.00				
Ausable-----	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Depth to	1.00
	Depth to	1.00	Depth to	1.00	saturated zone	
	saturated zone		saturated zone		Too sandy	1.00
	Seepage	1.00	Seepage	1.00	Seepage	1.00
	Too sandy	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00				
22A:						
Comstock-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
24A:						
Poskin-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
27A:						
Scott Lake-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Too sandy	1.00
	saturated zone		saturated zone		Seepage	1.00
	Seepage	1.00	Seepage	1.00	Depth to	0.47
	Too sandy	1.00			saturated zone	
					Gravel content	0.09
28B:						
Haugen, very stony--	Very limited		Somewhat limited		Somewhat limited	
	Depth to	0.99	Depth to	0.75	Depth to	0.86
	saturated zone		saturated zone		saturated zone	
					Gravel content	0.01

Table 19b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
28B:						
Haugen-----	Very limited		Somewhat limited		Somewhat limited	
	Depth to	0.99	Depth to	0.75	Depth to	0.86
	saturated zone		saturated zone		saturated zone	
					Gravel content	0.01
Rosholt, very stony	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
					Gravel content	0.06
Rosholt-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
					Gravel content	0.02
28C:						
Haugen, very stony--	Very limited		Somewhat limited		Somewhat limited	
	Depth to	0.99	Depth to	0.75	Depth to	0.86
	saturated zone		saturated zone		saturated zone	
	Slope	0.04	Slope	0.04	Slope	0.04
					Gravel content	0.01
Haugen-----	Very limited		Somewhat limited		Somewhat limited	
	Depth to	0.99	Depth to	0.75	Depth to	0.86
	saturated zone		saturated zone		saturated zone	
	Slope	0.04	Slope	0.04	Slope	0.04
					Gravel content	0.01
Rosholt, very stony	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	0.04	Seepage	1.00
	Slope	0.04			Gravel content	0.06
					Slope	0.04
Rosholt-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	0.04	Seepage	1.00
	Slope	0.04			Slope	0.04
					Gravel content	0.02
33B:						
Chetek-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
					Gravel content	0.11
33C:						
Chetek-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	0.04	Seepage	1.00
	Slope	0.04			Gravel content	0.11
					Slope	0.04
38A:						
Rosholt-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
					Gravel content	0.02



Table 19b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
38B: Rosholt-----	Very limited Seepage Too sandy	 1.00 1.00	Very limited Seepage	 1.00	Very limited Too sandy Seepage Gravel content	 1.00 1.00 0.02
38C: Rosholt-----	Very limited Seepage Too sandy Slope	 1.00 1.00 0.04	Very limited Seepage Slope	 1.00 0.04	Very limited Too sandy Seepage Slope Gravel content	 1.00 1.00 0.04 0.02
38D: Rosholt-----	Very limited Seepage Too sandy Slope	 1.00 1.00 1.00	Very limited Seepage Slope	 1.00 1.00	Very limited Too sandy Seepage Slope Gravel content	 1.00 1.00 1.00 0.02
42D: Amery-----	Very limited Slope	 1.00	Very limited Slope	 1.00	Very limited Slope Gravel content	 1.00 0.02
43B: Antigo-----	Very limited Seepage Too sandy	 1.00 1.00	Very limited Seepage	 1.00	Very limited Too sandy Seepage	 1.00 1.00
43C: Antigo-----	Very limited Seepage Too sandy Slope	 1.00 1.00 0.37	Very limited Seepage Slope	 1.00 0.37	Very limited Too sandy Seepage Slope	 1.00 1.00 0.37
43D: Antigo-----	Very limited Slope Seepage Too sandy	 1.00 1.00 1.00	Very limited Slope Seepage	 1.00 1.00	Very limited Slope Too sandy Seepage	 1.00 1.00 1.00
48A: Brill-----	Very limited Depth to saturated zone Seepage Too sandy	 1.00 1.00 1.00	Very limited Seepage Depth to saturated zone	 1.00 0.99	Very limited Too sandy Seepage Depth to saturated zone	 1.00 1.00 0.99
63A: Crystal Lake-----	Very limited Depth to saturated zone	 1.00	Very limited Depth to saturated zone	 1.00	Somewhat limited Depth to saturated zone	 0.86
63B: Crystal Lake-----	Very limited Depth to saturated zone	 1.00	Very limited Depth to saturated zone	 1.00	Somewhat limited Depth to saturated zone	 0.86

Table 19b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
63C: Crystal Lake-----	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.86
	Slope	0.04	Slope	0.04	Slope	0.04
63E: Crystal Lake-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Slope	1.00	Slope	1.00
	Slope	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.47
64A: Totagatic-----	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too sandy	1.00
	Seepage	1.00	Seepage	1.00	Seepage	1.00
	Too sandy	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00				
Winterfield-----	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Too sandy	1.00
	Seepage	1.00	Seepage	1.00	Seepage	1.00
	Too sandy	1.00				
69B: Keweenaw-----	Very limited		Very limited		Somewhat limited	
	Seepage	1.00	Seepage	1.00	Too sandy	0.50
	Too sandy	0.50			Seepage	0.22
Sayner-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
					Gravel content	0.07
Vilas-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
69C: Keweenaw-----	Very limited		Very limited		Somewhat limited	
	Seepage	1.00	Seepage	1.00	Too sandy	0.50
	Too sandy	0.50	Slope	0.16	Seepage	0.22
	Slope	0.16			Slope	0.16
Sayner-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	0.16	Seepage	1.00
	Slope	0.16			Slope	0.16
					Gravel content	0.03
Vilas-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	0.16	Seepage	1.00
	Slope	0.16			Slope	0.16

Table 19b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
69E:						
Keweenaw-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Seepage	1.00	Seepage	1.00	Too sandy	0.50
	Too sandy	0.50			Seepage	0.22
Sayner-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
					Gravel content	0.03
Vilas-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
74B:						
Vilas-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
74C:						
Vilas-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	0.37	Seepage	1.00
	Slope	0.37			Slope	0.37
74D:						
Vilas-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
100B:						
Menahga-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
100C:						
Menahga-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	0.04	Seepage	1.00
	Slope	0.04			Slope	0.04
100D:						
Menahga-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	1.00	Seepage	1.00
	Slope	1.00			Slope	1.00
127D:						
Amery-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
					Gravel content	0.02
Rosholt-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	1.00	Seepage	1.00
	Slope	1.00			Slope	1.00
					Gravel content	0.06

Table 19b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
127E:						
Amery-----	Very limited Slope	1.00	Very limited Slope	1.00	Very limited Slope Gravel content	1.00 0.02
Rosholt-----	Very limited Slope Seepage Too sandy	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Too sandy Seepage Gravel content	1.00 1.00 1.00 0.06
156B:						
Magnor, very stony--	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Magnor-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
157B:						
Freeon, very stony--	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Freeon-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
157C:						
Freeon, very stony--	Very limited Depth to saturated zone Slope	1.00 0.04	Very limited Depth to saturated zone Slope	1.00 0.04	Very limited Depth to saturated zone Slope	1.00 0.04
Freeon-----	Very limited Depth to saturated zone Slope	1.00 0.04	Very limited Depth to saturated zone Slope	1.00 0.04	Very limited Depth to saturated zone Slope	1.00 0.04
160A:						
Oesterle-----	Very limited Depth to saturated zone Seepage Too sandy	1.00 1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Depth to saturated zone Too sandy Seepage Gravel content	1.00 1.00 1.00 0.04
182B:						
Padus-----	Very limited Seepage Too sandy	1.00 1.00	Very limited Seepage	1.00	Very limited Too sandy Seepage	1.00 1.00
182C:						
Padus-----	Very limited Seepage Too sandy Slope	1.00 1.00 0.37	Very limited Seepage Slope	1.00 0.37	Very limited Too sandy Seepage Slope	1.00 1.00 0.37

Table 19b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
192A: Worcester-----	Very limited Depth to saturated zone Seepage Too sandy	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00 1.00	Very limited Depth to saturated zone Too sandy Seepage Gravel content	1.00 1.00 1.00 1.00 0.04
193A: Minocqua-----	Very limited Depth to saturated zone Seepage Too sandy Ponding	1.00 1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Seepage Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Too sandy Seepage Ponding Gravel content	1.00 1.00 1.00 1.00 1.00 0.01
215B: Pence-----	Very limited Seepage Too sandy	1.00 1.00 1.00	Very limited Seepage	1.00	Very limited Too sandy Seepage Gravel content	1.00 1.00 1.00 0.16
215C: Pence-----	Very limited Seepage Too sandy Slope	1.00 1.00 1.00 0.37	Very limited Seepage Slope	1.00 0.37	Very limited Too sandy Seepage Slope Gravel content	1.00 1.00 1.00 0.37 0.16
215D: Pence-----	Very limited Slope Seepage Too sandy	1.00 1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Too sandy Seepage Gravel content	1.00 1.00 1.00 1.00 0.16
315A: Rib-----	Very limited Depth to saturated zone Seepage Too sandy Ponding	1.00 1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Seepage Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Too sandy Seepage Ponding	1.00 1.00 1.00 1.00 1.00
337A: Plover-----	Very limited Depth to saturated zone Too sandy	1.00 1.00 1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Too sandy	1.00 1.00 1.00
368B: Mahtomedi-----	Very limited Seepage Too sandy	1.00 1.00 1.00	Very limited Seepage	1.00	Very limited Too sandy Seepage Gravel content	1.00 1.00 1.00 0.01
Cress-----	Very limited Seepage Too sandy	1.00 1.00 1.00	Very limited Seepage	1.00	Very limited Too sandy Seepage Gravel content	1.00 1.00 1.00 0.02

Table 19b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
368C:						
Mahtomedi-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	0.04	Seepage	1.00
	Slope	0.04			Slope	0.04
					Gravel content	0.01
Cress-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	0.04	Seepage	1.00
	Slope	0.04			Slope	0.04
					Gravel content	0.02
368D:						
Mahtomedi-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	1.00	Seepage	1.00
	Slope	1.00			Slope	1.00
					Gravel content	0.01
Cress-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	1.00	Seepage	1.00
	Slope	1.00			Slope	1.00
					Gravel content	0.02
371A:						
Croswell-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Too sandy	1.00
	saturated zone		saturated zone		Seepage	1.00
	Seepage	1.00	Seepage	1.00	Depth to	0.86
	Too sandy	1.00			saturated zone	
380B:						
Cress-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
					Gravel content	0.02
Rosholt-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
					Gravel content	0.02
380C:						
Cress-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	0.04	Seepage	1.00
	Slope	0.04			Slope	0.04
					Gravel content	0.02
Rosholt-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	0.04	Seepage	1.00
	Slope	0.04			Slope	0.04
					Gravel content	0.02

Table 19b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
380D:						
Cress-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	1.00	Seepage	1.00
	Slope	1.00			Slope	1.00
					Gravel content	0.02
Rosholt-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	1.00	Seepage	1.00
	Slope	1.00			Slope	1.00
					Gravel content	0.02
383B:						
Mahtomedi-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
					Gravel content	0.01
383C:						
Mahtomedi-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	0.04	Seepage	1.00
	Slope	0.04			Slope	0.04
					Gravel content	0.01
383D:						
Mahtomedi-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	1.00	Seepage	1.00
	Slope	1.00			Slope	1.00
					Gravel content	0.01
396B:						
Friendship-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Too sandy	1.00
	saturated zone		saturated zone		Seepage	1.00
	Seepage	1.00	Seepage	1.00		
	Too sandy	1.00				
Wurtsmith-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Too sandy	1.00
	saturated zone		saturated zone		Seepage	1.00
	Seepage	1.00	Seepage	1.00	Depth to	0.86
	Too sandy	1.00			saturated zone	
Grayling-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
397A:						
Perchlake-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Seepage	1.00	Seepage	1.00	Seepage	1.00
	Too sandy	0.50			Too sandy	0.50
399B:						
Grayling-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00

Table 19b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
399C: Grayling-----	Very limited Seepage Too sandy Slope	 1.00 1.00 0.04	Very limited Seepage Slope	 1.00 0.04	Very limited Too sandy Seepage Slope	 1.00 1.00 0.04
399D: Grayling-----	Very limited Seepage Too sandy Slope	 1.00 1.00 1.00	Very limited Seepage Slope	 1.00 1.00	Very limited Too sandy Seepage Slope	 1.00 1.00 1.00
405A: Lupton-----	Very limited Depth to saturated zone Content of organic matter Seepage Ponding	 1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Seepage Ponding	 1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Ponding Seepage	 1.00 1.00 1.00 1.00 0.16
Cathro-----	Very limited Depth to saturated zone Ponding	 1.00 1.00	Very limited Depth to saturated zone Seepage Ponding	 1.00 1.00 1.00	Very limited Depth to saturated zone Ponding	 1.00 1.00
Tawas-----	Very limited Depth to saturated zone Seepage Too sandy Ponding	 1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Seepage Ponding	 1.00 1.00 1.00	Very limited Depth to saturated zone Too sandy Seepage Ponding	 1.00 1.00 1.00 1.00
406A: Loxley-----	Very limited Depth to saturated zone Content of organic matter Seepage Ponding	 1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Seepage Ponding	 1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Ponding Seepage	 1.00 1.00 1.00 1.00 0.16
407A: Seelyeville-----	Very limited Depth to saturated zone Content of organic matter Seepage Ponding	 1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Seepage Ponding	 1.00 1.00 1.00	Very limited Depth to saturated zone Content of organic matter Ponding Seepage	 1.00 1.00 1.00 1.00 0.16
Markey-----	Very limited Depth to saturated zone Seepage Too sandy Ponding	 1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Seepage Ponding	 1.00 1.00 1.00	Very limited Depth to saturated zone Too sandy Seepage Ponding	 1.00 1.00 1.00 1.00



Table 19b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
410A: Seelyeville-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Content of organic matter	1.00	Seepage	1.00	Content of organic matter	1.00
	Seepage	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00			Seepage	0.16
Cathro-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Seepage	1.00	Ponding	1.00
			Ponding	1.00		
412A: Rifle-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage	1.00	Seepage	1.00	Content of organic matter	1.00
	Content of organic matter	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00			Seepage	0.52
Tacoosh-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Content of organic matter	1.00	Seepage	1.00	Content of organic matter	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
					Seepage	0.21
415A: Greenwood-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Content of organic matter	1.00	Seepage	1.00	Content of organic matter	1.00
	Seepage	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00			Seepage	0.16
439B: Graycalm-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
Menahga-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
439C: Graycalm-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	0.04	Seepage	1.00
	Slope	0.04			Slope	0.04
Menahga-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	0.04	Seepage	1.00
	Slope	0.04			Slope	0.04

Table 19b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
439D:						
Graycalm-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	1.00	Seepage	1.00
	Slope	1.00			Slope	1.00
Menahga-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	1.00	Seepage	1.00
	Slope	1.00			Slope	1.00
441C:						
Freeon-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Slope	0.37	Slope	0.37	Slope	0.37
Cathro-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Ponding	1.00	Seepage	1.00	Ponding	1.00
			Ponding	1.00		
442C:						
Haugen-----	Very limited		Somewhat limited		Somewhat limited	
	Depth to	0.99	Depth to	0.75	Depth to	0.86
	saturated zone		saturated zone		saturated zone	
					Gravel content	0.01
Greenwood-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Content of	1.00	Seepage	1.00	Content of	1.00
	organic matter		Ponding	1.00	organic matter	
	Seepage	1.00			Ponding	1.00
	Ponding	1.00			Seepage	0.22
443D:						
Amery-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
					Gravel content	0.02
Greenwood-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Content of	1.00	Seepage	1.00	Content of	1.00
	organic matter		Ponding	1.00	organic matter	
	Seepage	1.00			Ponding	1.00
	Ponding	1.00			Seepage	0.22
461A:						
Bowstring-----	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Depth to	1.00
	Depth to	1.00	Depth to	1.00	saturated zone	
	saturated zone		saturated zone		Content of	1.00
	Content of	1.00	Seepage	1.00	organic matter	
	organic matter		Ponding	1.00	Ponding	1.00
	Seepage	1.00			Seepage	0.16
	Ponding	1.00				

Table 19b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
484A:						
Greenwood-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Content of	1.00	Seepage	1.00	Content of	1.00
	organic matter		Ponding	1.00	organic matter	
	Seepage	1.00			Ponding	1.00
	Ponding	1.00			Seepage	0.22
Beseman-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Content of	1.00	Seepage	1.00	Content of	1.00
	organic matter		Ponding	1.00	organic matter	
	Ponding	1.00			Ponding	1.00
					Seepage	0.22
495B:						
Karlsborg-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Seepage	1.00	Too sandy	1.00
	saturated zone		Depth to	0.99	Seepage	1.00
	Seepage	1.00	saturated zone		Too clayey	1.00
	Too sandy	1.00			Depth to	0.99
					saturated zone	
Grettum-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Too sandy	1.00
	saturated zone		saturated zone		Seepage	1.00
	Seepage	1.00	Seepage	1.00		
	Too sandy	1.00				
Perida-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
	Depth to	0.09				
	saturated zone					
495C:						
Karlsborg-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Seepage	1.00	Too sandy	1.00
	saturated zone		Depth to	0.99	Seepage	1.00
	Seepage	1.00	saturated zone		Too clayey	1.00
	Too sandy	1.00	Slope	0.04	Depth to	0.99
	Slope	0.04			saturated zone	
					Slope	0.04
Grettum-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Too sandy	1.00
	saturated zone		saturated zone		Seepage	1.00
	Seepage	1.00	Seepage	1.00	Slope	0.04
	Too sandy	1.00	Slope	0.04		
	Slope	0.04				
Perida-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	0.04	Seepage	1.00
	Depth to	0.09			Slope	0.04
	saturated zone					
	Slope	0.04				

Table 19b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
495D: Karlsborg-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Seepage	1.00	Too sandy	1.00
	saturated zone		Slope	1.00	Seepage	1.00
	Seepage	1.00	Depth to	0.99	Too clayey	1.00
	Too sandy	1.00	saturated zone		Slope	1.00
	Slope	1.00			Depth to	0.99
					saturated zone	
Gretttum-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Too sandy	1.00
	saturated zone		saturated zone		Slope	1.00
	Seepage	1.00	Seepage	1.00	Seepage	1.00
	Too sandy	1.00	Slope	1.00		
	Slope	1.00				
Perida-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	1.00	Seepage	1.00
	Slope	1.00			Slope	1.00
	Depth to	0.09				
	saturated zone					
497A: Meenon-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
515A: Manitowish-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Too sandy	1.00
	saturated zone		saturated zone		Seepage	1.00
	Seepage	1.00	Seepage	1.00	Depth to	0.47
	Too sandy	1.00			saturated zone	
					Gravel content	0.04
521A: Dody-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Seepage	1.00	Seepage	1.00	Too clayey	1.00
	Too clayey	1.00	Ponding	1.00	Hard to compact	1.00
	Ponding	1.00			Ponding	1.00
524E: Rock outcrop-----	Not rated		Not rated		Not rated	
Frogcreek-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
Metonga-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Depth to bedrock	1.00
	Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
			Seepage	1.00		

Table 19b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
542B: Haugen, very stony--	Very limited Depth to saturated zone	0.99	Somewhat limited Depth to saturated zone	0.75	Somewhat limited Depth to saturated zone Gravel content	0.86 0.01
Haugen-----	Very limited Depth to saturated zone	0.99	Somewhat limited Depth to saturated zone	0.75	Somewhat limited Depth to saturated zone Gravel content	0.86 0.01
542C: Haugen, very stony--	Very limited Depth to saturated zone Slope	0.99 0.04	Somewhat limited Depth to saturated zone Slope	0.75 0.04	Somewhat limited Depth to saturated zone Slope Gravel content	0.86 0.04 0.01
Haugen-----	Very limited Depth to saturated zone Slope	0.99 0.04	Somewhat limited Depth to saturated zone Slope	0.75 0.04	Somewhat limited Depth to saturated zone Slope Gravel content	0.86 0.04 0.01
543B: Anigon-----	Very limited Seepage Too sandy	1.00 1.00	Very limited Seepage	1.00	Very limited Too sandy Seepage	1.00 1.00
543C2: Anigon-----	Very limited Seepage Too sandy Slope	1.00 1.00 0.04	Very limited Seepage Slope	1.00 0.04	Very limited Too sandy Seepage Slope	1.00 1.00 0.04
544F: Menahga-----	Very limited Slope Seepage Too sandy	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Too sandy Seepage	1.00 1.00 1.00
Mahtomedi-----	Very limited Slope Seepage Too sandy	1.00 1.00 1.00	Very limited Slope Seepage	1.00 1.00	Very limited Slope Too sandy Seepage Gravel content	1.00 1.00 1.00 0.01
555A: Fordum-----	Very limited Flooding Depth to saturated zone Seepage Too sandy Ponding	1.00 1.00 1.00 1.00 1.00	Very limited Flooding Depth to saturated zone Seepage Ponding	1.00 1.00 1.00 1.00	Very limited Depth to saturated zone Too sandy Seepage Ponding	1.00 1.00 1.00 1.00
574B: Sayner-----	Very limited Seepage Too sandy	1.00 1.00	Very limited Seepage	1.00	Very limited Too sandy Seepage Gravel content	1.00 1.00 0.08

Table 19b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
574C: Sayner-----	Very limited Seepage Too sandy Slope	 1.00 1.00 0.37	Very limited Seepage Slope	 1.00 0.37	Very limited Too sandy Seepage Slope Gravel content	 1.00 1.00 0.37 0.08
574E: Sayner-----	Very limited Slope Seepage Too sandy	 1.00 1.00 1.00	Very limited Slope Seepage	 1.00 1.00	Very limited Slope Too sandy Seepage Gravel content	 1.00 1.00 1.00 0.08
579B: Parkfalls-----	Very limited Depth to saturated zone	 1.00	Very limited Depth to saturated zone	 1.00	Very limited Depth to saturated zone	 1.00
600A: Haplosaprists-----	Not rated		Very limited Ponding Depth to saturated zone	 1.00 1.00	Not rated	
Psammaquents-----	Not rated		Very limited Ponding Depth to saturated zone	 1.00 1.00	Not rated	
615B: Cress-----	Very limited Seepage Too sandy	 1.00 1.00	Very limited Seepage	 1.00	Very limited Too sandy Seepage Gravel content	 1.00 1.00 0.02
615C: Cress-----	Very limited Seepage Too sandy Slope	 1.00 1.00 0.04	Very limited Seepage Slope	 1.00 0.04	Very limited Too sandy Seepage Slope Gravel content	 1.00 1.00 0.04 0.02
615D: Cress-----	Very limited Seepage Too sandy Slope	 1.00 1.00 1.00	Very limited Seepage Slope	 1.00 1.00	Very limited Too sandy Seepage Slope Gravel content	 1.00 1.00 1.00 0.02
623A: Capitola-----	Very limited Depth to saturated zone Ponding	 1.00 1.00	Very limited Depth to saturated zone Ponding	 1.00 1.00	Very limited Depth to saturated zone Ponding	 1.00 1.00

Table 19b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
624A: Ossmer-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
632A: Aftad-----	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.86
632B: Aftad-----	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.86
632C: Aftad-----	Very limited		Very limited		Somewhat limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.86
	Slope	0.04	Slope	0.04	Slope	0.04
633F: Pence-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
					Gravel content	0.16
Padus-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
648B: Sconsin-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Seepage	1.00	Depth to saturated zone	0.99
	Seepage	1.00	Depth to saturated zone	0.99		
670C: Keweenaw-----	Very limited		Very limited		Somewhat limited	
	Seepage	1.00	Seepage	1.00	Too sandy	0.50
	Too sandy	0.50	Slope	0.37	Slope	0.37
	Slope	0.37			Seepage	0.22
Pence-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	0.37	Seepage	1.00
	Slope	0.37			Slope	0.37
					Gravel content	0.16
670E: Keweenaw-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Seepage	1.00	Seepage	1.00	Too sandy	0.50
	Too sandy	0.50			Seepage	0.22

Table 19b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
670E: Pence-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
					Gravel content	0.16
671B: Spoonershill, stony--	Very limited		Somewhat limited		Somewhat limited	
	Depth to	0.99	Depth to	0.75	Depth to	0.86
	saturated zone		saturated zone		saturated zone	
	Too sandy	0.50			Too sandy	0.50
Spoonershill-----	Very limited		Somewhat limited		Somewhat limited	
	Depth to	0.99	Depth to	0.75	Depth to	0.86
	saturated zone		saturated zone		saturated zone	
	Too sandy	0.50			Too sandy	0.50
680B: Stanberry, stony----	Very limited		Somewhat limited		Somewhat limited	
	Depth to	0.99	Depth to	0.75	Depth to	0.86
	saturated zone		saturated zone		saturated zone	
	Too sandy	0.50			Too sandy	0.50
Pence, stony-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
					Gravel content	0.16
683A: Tipler-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Too sandy	1.00
	saturated zone		saturated zone		Seepage	1.00
	Seepage	1.00	Seepage	1.00	Depth to	0.47
	Too sandy	1.00			saturated zone	
					Gravel content	0.02
706A: Winterfield-----	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Depth to	1.00
	Depth to	1.00	Depth to	1.00	saturated zone	
	saturated zone		saturated zone		Too sandy	1.00
	Seepage	1.00	Seepage	1.00	Seepage	1.00
	Too sandy	1.00				
Totagatic-----	Very limited		Very limited		Very limited	
	Flooding	1.00	Flooding	1.00	Depth to	1.00
	Depth to	1.00	Depth to	1.00	saturated zone	
	saturated zone		saturated zone		Too sandy	1.00
	Seepage	1.00	Seepage	1.00	Seepage	1.00
	Too sandy	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00				
724A: Rib-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Ponding	1.00	Seepage	1.00
	Ponding	1.00			Ponding	1.00



Table 19b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
724A: Rock outcrop-----	Not rated		Not rated		Not rated	
726B: Sissabagama-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Somewhat limited Depth to saturated zone	0.47
733A: Wozny-----	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
771A: Lenroot-----	Very limited Depth to saturated zone Seepage Too sandy	1.00 1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Too sandy Seepage Depth to saturated zone Gravel content	1.00 1.00 0.86 0.05
827A: Scoba-----	Very limited Depth to saturated zone Seepage Too sandy	1.00 1.00 1.00	Very limited Depth to saturated zone Seepage	1.00 1.00	Very limited Too sandy Seepage Depth to saturated zone Gravel content	1.00 1.00 0.86 0.03
853C: Frogcreek-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Stinnett-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Wozny-----	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Depth to saturated zone Ponding	1.00 1.00
856B: Stinnett-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
857B: Frogcreek-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
857C: Frogcreek-----	Very limited Depth to saturated zone Slope	1.00 0.16	Very limited Depth to saturated zone Slope	1.00 0.16	Very limited Depth to saturated zone Slope	1.00 0.16

Table 19b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
873B: Stanberry-----	Very limited		Somewhat limited		Somewhat limited	
	Depth to	0.99	Depth to	0.75	Depth to	0.86
	saturated zone		saturated zone		saturated zone	
	Too sandy	0.50			Too sandy	0.50
873C: Stanberry-----	Very limited		Somewhat limited		Somewhat limited	
	Depth to	0.99	Depth to	0.75	Depth to	0.86
	saturated zone		saturated zone		saturated zone	
	Too sandy	0.50	Slope	0.37	Too sandy	0.50
	Slope	0.37			Slope	0.37
873D: Stanberry-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Depth to	0.99	Depth to	0.75	Depth to	0.86
	saturated zone		saturated zone		saturated zone	
	Too sandy	0.50			Too sandy	0.50
905A: Cublake-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Seepage	1.00
	saturated zone		saturated zone		Too sandy	0.50
	Too sandy	0.50	Seepage	1.00	Depth to	0.47
					saturated zone	
926A: Flink-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
			Seepage	1.00		
943D: Stanberry-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Depth to	0.99	Depth to	0.75	Depth to	0.86
	saturated zone		saturated zone		saturated zone	
	Too sandy	0.50			Too sandy	0.50
Greenwood-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Content of	1.00	Ponding	1.00	Content of	1.00
	organic matter				organic matter	
	Ponding	1.00			Ponding	1.00
948A: Billyboy-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Too sandy	1.00
	saturated zone		saturated zone		Seepage	1.00
	Seepage	1.00	Seepage	1.00	Depth to	0.99
	Too sandy	1.00			saturated zone	
970C: Keweenaw-----	Very limited		Very limited		Somewhat limited	
	Seepage	1.00	Seepage	1.00	Too sandy	0.50
	Too sandy	0.50	Slope	0.37	Slope	0.37
	Slope	0.37			Seepage	0.22

Table 19b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
970C:						
Pence-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	0.37	Seepage	1.00
	Slope	0.37			Slope	0.37
					Gravel content	0.16
Greenwood-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Content of	1.00	Seepage	1.00	Content of	1.00
	organic matter		Ponding	1.00	organic matter	
	Seepage	1.00			Ponding	1.00
	Ponding	1.00			Seepage	0.22
970E:						
Keweenaw-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Seepage	1.00	Seepage	1.00	Too sandy	0.50
	Too sandy	0.50			Seepage	0.22
Pence-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
					Gravel content	0.16
Greenwood-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Content of	1.00	Seepage	1.00	Content of	1.00
	organic matter		Ponding	1.00	organic matter	
	Seepage	1.00			Ponding	1.00
	Ponding	1.00			Seepage	0.22
1070C:						
Fremstadt-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Seepage	1.00
	Too sandy	0.50	Slope	0.16	Too sandy	0.50
	Slope	0.16			Slope	0.16
Cress-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	0.04	Seepage	1.00
	Slope	0.04			Slope	0.04
					Gravel content	0.02
1070D:						
Fremstadt-----	Very limited		Very limited		Very limited	
	Slope	1.00	Slope	1.00	Slope	1.00
	Seepage	1.00	Seepage	1.00	Seepage	1.00
	Too sandy	0.50			Too sandy	0.50
Cress-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Slope	1.00	Seepage	1.00
	Slope	1.00			Slope	1.00
					Gravel content	0.02

Table 19b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1080B:						
Spoonerhill-----	Very limited		Somewhat limited		Somewhat limited	
	Depth to	0.99	Depth to	0.75	Depth to	0.86
	saturated zone		saturated zone		saturated zone	
	Too sandy	0.50			Too sandy	0.50
Spoonerhill, stony--	Very limited		Somewhat limited		Somewhat limited	
	Depth to	0.99	Depth to	0.75	Depth to	0.86
	saturated zone		saturated zone		saturated zone	
	Too sandy	0.50			Too sandy	0.50
Cress-----	Very limited		Very limited		Very limited	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
					Gravel content	0.02
1653C:						
Stanberry-----	Very limited		Somewhat limited		Somewhat limited	
	Depth to	0.99	Depth to	0.75	Depth to	0.86
	saturated zone		saturated zone		saturated zone	
	Too sandy	0.50	Slope	0.04	Too sandy	0.50
	Slope	0.04			Slope	0.04
Parkfalls-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
Wozny-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
2015:						
Pits-----	Not rated		Not rated		Not rated	
2050:						
Landfill-----	Not rated		Not rated		Not rated	
3011A:						
Barronett-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Ponding	1.00	Ponding	1.00	Ponding	1.00
3125A:						
Meehan-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone		saturated zone	
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
3126A:						
Wurtsmith-----	Very limited		Very limited		Very limited	
	Depth to	1.00	Depth to	1.00	Too sandy	1.00
	saturated zone		saturated zone		Seepage	1.00
	Seepage	1.00	Seepage	1.00	Depth to	0.86
	Too sandy	1.00			saturated zone	

Table 19b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3276A: Au Gres-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
3312B: Glendenning, very stony-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Glendenning-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
3336A: Fenander-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
3403A: Loxley-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Content of organic matter	1.00	Seepage	1.00	Content of organic matter	1.00
	Seepage	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00			Seepage	0.16
Beseman-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Content of organic matter	1.00	Seepage	1.00	Content of organic matter	1.00
	Ponding	1.00	Ponding	1.00	Ponding	1.00
					Seepage	0.22
Dawson-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Seepage	1.00	Seepage	1.00	Content of organic matter	1.00
	Content of organic matter	1.00	Ponding	1.00	Ponding	1.00
	Ponding	1.00			Seepage	0.16
3424C: Frogcreek-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
Magroc-----	Very limited		Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Depth to bedrock	1.00	Depth to bedrock	0.42	Too sandy	0.50
	Too sandy	0.50			Depth to bedrock	0.42

Table 19b.--Sanitary Facilities--Continued

Map symbol and soil name	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3424C: Stinnett-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
Rock outcrop-----	Not rated		Not rated		Not rated	
3446A: Newson-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00
	Seepage	1.00	Seepage	1.00	Too sandy	1.00
	Too sandy	1.00	Ponding	1.00	Seepage	1.00
	Ponding	1.00			Ponding	1.00
3448B: Grettum-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Too sandy	1.00
	Seepage	1.00	Seepage	1.00	Seepage	1.00
	Too sandy	1.00				
3448C: Grettum-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Too sandy	1.00
	Seepage	1.00	Seepage	1.00	Seepage	1.00
	Too sandy	1.00	Slope	0.04	Slope	0.04
	Slope	0.04				
3516A: Slimlake-----	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	Very limited Too sandy	1.00
	Seepage	1.00	Seepage	1.00	Seepage	1.00
	Too sandy	1.00			Depth to saturated zone	0.47
3629B: Perida-----	Very limited Seepage	1.00	Very limited Seepage	1.00	Very limited Too sandy	1.00
	Too sandy	1.00			Seepage	1.00
	Depth to saturated zone	0.09				
M-W: Miscellaneous water	Not rated		Not rated		Not rated	
W: Water-----	Not rated		Not rated		Not rated	

Table 20a.--Construction Materials

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. "Not rated" indicates that data are not available or that no rating is applicable. See text for further explanation of ratings in this table)

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
3A:				
Totagatic-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.44
	Thickest layer	0.00	Bottom layer	0.64
Bowstring-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
Ausable-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.58
22A:				
Comstock-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
24A:				
Poskin-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.00
	Bottom layer	0.08	Bottom layer	0.50
27A:				
Scott Lake-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.02
	Bottom layer	0.16	Bottom layer	0.50
28B:				
Haugen, very stony--	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.02
	Thickest layer	0.00	Thickest layer	0.04
Haugen-----	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.02
	Thickest layer	0.00	Thickest layer	0.04
Rosholt, very stony	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.02
	Bottom layer	0.16	Bottom layer	0.50
Rosholt-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.02
	Bottom layer	0.16	Bottom layer	0.50
28C:				
Haugen, very stony--	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.02
	Thickest layer	0.00	Thickest layer	0.04

Table 20a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
28C:				
Haugen-----	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.02
	Thickest layer	0.00	Thickest layer	0.04
Rosholt, very stony	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.02
	Bottom layer	0.16	Bottom layer	0.50
Rosholt-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.02
	Bottom layer	0.16	Bottom layer	0.50
33B:				
Chetek-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.03
	Bottom layer	0.20	Bottom layer	0.50
33C:				
Chetek-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.03
	Bottom layer	0.20	Bottom layer	0.50
38A:				
Rosholt-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.02
	Bottom layer	0.16	Bottom layer	0.50
38B:				
Rosholt-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.02
	Bottom layer	0.16	Bottom layer	0.50
38C:				
Rosholt-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.02
	Bottom layer	0.16	Bottom layer	0.50
38D:				
Rosholt-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.02
	Bottom layer	0.16	Bottom layer	0.50
42D:				
Amery-----	Poor		Fair	
	Thickest layer	0.00	Bottom layer	0.03
	Bottom layer	0.00	Thickest layer	0.03
43B:				
Antigo-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.00
	Bottom layer	0.08	Bottom layer	0.50
43C:				
Antigo-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.00
	Bottom layer	0.08	Bottom layer	0.50
43D:				
Antigo-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.00
	Bottom layer	0.08	Bottom layer	0.50



Table 20a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
48A:				
Brill-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.00
	Bottom layer	0.08	Bottom layer	0.50
63A:				
Crystal Lake-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
63B:				
Crystal Lake-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
63C:				
Crystal Lake-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
63E:				
Crystal Lake-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
64A:				
Totagatic-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.44
	Thickest layer	0.00	Bottom layer	0.64
Winterfield-----	Poor		Fair	
	Thickest layer	0.00	Thickest layer	0.10
	Bottom layer	0.00	Bottom layer	0.64
69B:				
Keweenaw-----	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.10
	Thickest layer	0.00	Thickest layer	0.11
Sayner-----	Fair		Fair	
	Thickest layer	0.00	Bottom layer	0.43
	Bottom layer	0.08	Thickest layer	0.72
Vilas-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.72
	Thickest layer	0.00	Bottom layer	0.86
69C:				
Keweenaw-----	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.10
	Thickest layer	0.00	Thickest layer	0.11
Sayner-----	Fair		Fair	
	Thickest layer	0.00	Bottom layer	0.43
	Bottom layer	0.08	Thickest layer	0.72
Vilas-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.72
	Thickest layer	0.00	Bottom layer	0.86

Table 20a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
69E:				
Keweenaw-----	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.10
	Thickest layer	0.00	Thickest layer	0.11
Sayner-----	Fair		Fair	
	Thickest layer	0.00	Bottom layer	0.43
	Bottom layer	0.08	Thickest layer	0.72
Vilas-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.72
	Thickest layer	0.00	Bottom layer	0.86
74B:				
Vilas-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.72
	Thickest layer	0.00	Bottom layer	0.86
74C:				
Vilas-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.72
	Thickest layer	0.00	Bottom layer	0.86
74D:				
Vilas-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.72
	Thickest layer	0.00	Bottom layer	0.86
100B:				
Menahga-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.34
	Thickest layer	0.00	Bottom layer	0.64
100C:				
Menahga-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.34
	Thickest layer	0.00	Bottom layer	0.64
100D:				
Menahga-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.34
	Thickest layer	0.00	Bottom layer	0.64
127D:				
Amery-----	Poor		Fair	
	Thickest layer	0.00	Bottom layer	0.03
	Bottom layer	0.00	Thickest layer	0.03
Rosholt-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.02
	Bottom layer	0.16	Bottom layer	0.50
127E:				
Amery-----	Poor		Fair	
	Thickest layer	0.00	Bottom layer	0.03
	Bottom layer	0.00	Thickest layer	0.03
Rosholt-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.02
	Bottom layer	0.16	Bottom layer	0.50

Table 20a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
156B:				
Magnor, very stony--	Poor		Fair	
	Thickest layer	0.00	Bottom layer	0.00
	Bottom layer	0.00	Thickest layer	0.04
Magnor-----	Poor		Fair	
	Thickest layer	0.00	Bottom layer	0.00
	Bottom layer	0.00	Thickest layer	0.04
157B:				
Freeon, very stony--	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.03
	Thickest layer	0.00	Thickest layer	0.04
Freeon-----	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.03
	Thickest layer	0.00	Thickest layer	0.04
157C:				
Freeon, very stony--	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.03
	Thickest layer	0.00	Thickest layer	0.04
Freeon-----	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.03
	Thickest layer	0.00	Thickest layer	0.04
160A:				
Oesterle-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.04
	Bottom layer	0.16	Bottom layer	0.50
182B:				
Padus-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.02
	Bottom layer	0.08	Bottom layer	0.50
182C:				
Padus-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.02
	Bottom layer	0.08	Bottom layer	0.50
192A:				
Worcester-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.04
	Bottom layer	0.08	Bottom layer	0.50
193A:				
Minocqua-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.00
	Bottom layer	0.08	Bottom layer	0.50
215B:				
Pence-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.03
	Bottom layer	0.08	Bottom layer	0.50
215C:				
Pence-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.03
	Bottom layer	0.08	Bottom layer	0.50

Table 20a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
215D:				
Pence-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.03
	Bottom layer	0.08	Bottom layer	0.50
315A:				
Rib-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.00
	Bottom layer	0.08	Bottom layer	0.50
337A:				
Plover-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
368B:				
Mahtomedi-----	Fair		Fair	
	Thickest layer	0.00	Bottom layer	0.64
	Bottom layer	0.01	Thickest layer	0.64
Cress-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.08
	Bottom layer	0.16	Bottom layer	0.50
368C:				
Mahtomedi-----	Fair		Fair	
	Thickest layer	0.00	Bottom layer	0.64
	Bottom layer	0.01	Thickest layer	0.64
Cress-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.08
	Bottom layer	0.16	Bottom layer	0.50
368D:				
Mahtomedi-----	Fair		Fair	
	Thickest layer	0.00	Bottom layer	0.64
	Bottom layer	0.01	Thickest layer	0.64
Cress-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.08
	Bottom layer	0.16	Bottom layer	0.50
371A:				
Croswell-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.40
	Thickest layer	0.00	Bottom layer	0.86
380B:				
Cress-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.08
	Bottom layer	0.16	Bottom layer	0.50
Rosholt-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.02
	Bottom layer	0.16	Bottom layer	0.50
380C:				
Cress-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.08
	Bottom layer	0.16	Bottom layer	0.50

Table 20a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
380C: Rosholt-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.02
	Bottom layer	0.16	Bottom layer	0.50
380D: Cress-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.08
	Bottom layer	0.16	Bottom layer	0.50
Rosholt-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.02
	Bottom layer	0.16	Bottom layer	0.50
383B: Mahtomedi-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.64
	Bottom layer	0.01	Bottom layer	0.64
383C: Mahtomedi-----	Fair		Fair	
	Thickest layer	0.00	Bottom layer	0.64
	Bottom layer	0.01	Thickest layer	0.64
383D: Mahtomedi-----	Fair		Fair	
	Thickest layer	0.00	Bottom layer	0.64
	Bottom layer	0.01	Thickest layer	0.64
396B: Friendship-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.69
	Thickest layer	0.00	Bottom layer	0.86
Wurtsmith-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.56
	Thickest layer	0.00	Bottom layer	0.82
Grayling-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.64
	Thickest layer	0.00	Bottom layer	0.64
397A: Perchlake-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.44
	Thickest layer	0.00	Bottom layer	0.64
399B: Grayling-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.64
	Thickest layer	0.00	Bottom layer	0.64
399C: Grayling-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.64
	Thickest layer	0.00	Bottom layer	0.64
399D: Grayling-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.64
	Thickest layer	0.00	Bottom layer	0.64

Table 20a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
405A:				
Lupton-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
Cathro-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.03
Tawas-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.20
406A:				
Loxley-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
407A:				
Seelyeville-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
Markey-----	Poor		Fair	
	Thickest layer	0.00	Thickest layer	0.00
	Bottom layer	0.00	Bottom layer	0.64
410A:				
Seelyeville-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
Cathro-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.03
412A:				
Rifle-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
Tacoosh-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.03
415A:				
Greenwood-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
439B:				
Graycalm-----	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.18
	Thickest layer	0.00	Thickest layer	0.47
Menahga-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.34
	Thickest layer	0.00	Bottom layer	0.64

Table 20a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
439C:				
Graycalm-----	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.18
	Thickest layer	0.00	Thickest layer	0.47
Menahga-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.34
	Thickest layer	0.00	Bottom layer	0.64
439D:				
Graycalm-----	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.18
	Thickest layer	0.00	Thickest layer	0.47
Menahga-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.34
	Thickest layer	0.00	Bottom layer	0.64
441C:				
Freeon-----	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.03
	Thickest layer	0.00	Thickest layer	0.04
Cathro-----	Poor		Not rated	
	Bottom layer	0.00		
	Thickest layer	0.00		
442C:				
Haugen-----	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.02
	Thickest layer	0.00	Thickest layer	0.04
Greenwood-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
443D:				
Amery-----	Poor		Fair	
	Thickest layer	0.00	Bottom layer	0.03
	Bottom layer	0.00	Thickest layer	0.03
Greenwood-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
461A:				
Bowstring-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
484A:				
Greenwood-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
Beseman-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00

Table 20a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
495B:				
Karlsborg-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.72
Grettum-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.36
	Thickest layer	0.00	Bottom layer	0.58
Perida-----	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.58
	Thickest layer	0.00	Thickest layer	0.72
495C:				
Karlsborg-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.72
Grettum-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.36
	Thickest layer	0.00	Bottom layer	0.58
Perida-----	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.58
	Thickest layer	0.00	Thickest layer	0.72
495D:				
Karlsborg-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.72
Grettum-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.36
	Thickest layer	0.00	Bottom layer	0.58
Perida-----	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.58
	Thickest layer	0.00	Thickest layer	0.72
497A:				
Meenon-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.72
	Thickest layer	0.00	Bottom layer	0.72
515A:				
Manitowish-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.03
	Bottom layer	0.08	Bottom layer	0.50
521A:				
Dody-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.00
	Thickest layer	0.00	Bottom layer	0.13
524E:				
Rock outcrop-----	Not rated		Not rated	
Frogcreek-----	Poor		Fair	
	Thickest layer	0.00	Thickest layer	0.03
	Bottom layer	0.00	Bottom layer	0.09



Table 20a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
524E: Metonga-----	Poor		Fair	
	Thickest layer	0.00	Thickest layer	0.00
	Bottom layer	0.00	Bottom layer	0.04
542B: Haugen, very stony--	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.02
	Thickest layer	0.00	Thickest layer	0.04
Haugen-----	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.02
	Thickest layer	0.00	Thickest layer	0.04
542C: Haugen, very stony--	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.02
	Thickest layer	0.00	Thickest layer	0.04
Haugen-----	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.02
	Thickest layer	0.00	Thickest layer	0.04
543B: Anigon-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.00
	Bottom layer	0.08	Bottom layer	0.50
543C2: Anigon-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.00
	Bottom layer	0.08	Bottom layer	0.50
544F: Menahga-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.34
	Thickest layer	0.00	Bottom layer	0.64
Mahtomedi-----	Fair		Fair	
	Thickest layer	0.00	Bottom layer	0.64
	Bottom layer	0.01	Thickest layer	0.64
555A: Fordum-----	Poor		Fair	
	Thickest layer	0.00	Thickest layer	0.00
	Bottom layer	0.00	Bottom layer	0.53
574B: Sayner-----	Fair		Fair	
	Thickest layer	0.00	Bottom layer	0.43
	Bottom layer	0.08	Thickest layer	0.72
574C: Sayner-----	Fair		Fair	
	Thickest layer	0.00	Bottom layer	0.43
	Bottom layer	0.08	Thickest layer	0.72
574E: Sayner-----	Fair		Fair	
	Thickest layer	0.00	Bottom layer	0.43
	Bottom layer	0.08	Thickest layer	0.72

Table 20a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
579B:				
Parkfalls-----	Poor		Fair	
	Thickest layer	0.00	Thickest layer	0.03
	Bottom layer	0.00	Bottom layer	0.07
600A:				
Haplosaprists-----	Not rated		Not rated	
Psammaquents-----	Not rated		Not rated	
615B:				
Cress-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.08
	Bottom layer	0.16	Bottom layer	0.50
615C:				
Cress-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.08
	Bottom layer	0.16	Bottom layer	0.50
615D:				
Cress-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.08
	Bottom layer	0.16	Bottom layer	0.50
623A:				
Capitola-----	Poor		Fair	
	Thickest layer	0.00	Thickest layer	0.00
	Bottom layer	0.00	Bottom layer	0.04
624A:				
Ossmer-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.00
	Bottom layer	0.08	Bottom layer	0.50
632A:				
Aftad-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
632B:				
Aftad-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
632C:				
Aftad-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
633F:				
Pence-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.03
	Bottom layer	0.08	Bottom layer	0.50
Padus-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.02
	Bottom layer	0.08	Bottom layer	0.50

Table 20a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
648B:				
Sconsin-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.00
	Bottom layer	0.25	Bottom layer	0.01
670C:				
Keweenaw-----	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.10
	Thickest layer	0.00	Thickest layer	0.11
Pence-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.03
	Bottom layer	0.08	Bottom layer	0.50
670E:				
Keweenaw-----	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.10
	Thickest layer	0.00	Thickest layer	0.11
Pence-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.03
	Bottom layer	0.08	Bottom layer	0.50
671B:				
Spoonerhill, stony--	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.11
	Thickest layer	0.00	Thickest layer	0.11
Spoonerhill-----	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.11
	Thickest layer	0.00	Thickest layer	0.11
680B:				
Stanberry, stony---	Poor		Fair	
	Thickest layer	0.00	Thickest layer	0.03
	Bottom layer	0.00	Bottom layer	0.07
Pence, stony-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.03
	Bottom layer	0.08	Bottom layer	0.50
683A:				
Tipler-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.03
	Bottom layer	0.08	Bottom layer	0.50
706A:				
Winterfield-----	Poor		Fair	
	Thickest layer	0.00	Thickest layer	0.00
	Bottom layer	0.00	Bottom layer	0.64
Totagatic-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.44
	Thickest layer	0.00	Bottom layer	0.64
724A:				
Rib-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.00
	Bottom layer	0.08	Bottom layer	0.50
Rock outcrop-----	Not rated		Not rated	

Table 20a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
726B: Sissabagama-----	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.36
733A: Wozny-----	Poor		Fair	
	Thickest layer	0.00	Thickest layer	0.00
	Bottom layer	0.00	Bottom layer	0.09
771A: Lenroot-----	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.54
827A: Scoba-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.02
	Bottom layer	0.16	Bottom layer	0.50
853C: Frogcreek-----	Poor		Fair	
	Thickest layer	0.00	Thickest layer	0.03
	Bottom layer	0.00	Bottom layer	0.09
Stinnett-----	Poor		Fair	
	Thickest layer	0.00	Thickest layer	0.00
	Bottom layer	0.00	Bottom layer	0.09
Wozny-----	Poor		Fair	
	Thickest layer	0.00	Thickest layer	0.00
	Bottom layer	0.00	Bottom layer	0.09
856B: Stinnett-----	Poor		Fair	
	Thickest layer	0.00	Thickest layer	0.00
	Bottom layer	0.00	Bottom layer	0.09
857B: Frogcreek-----	Poor		Fair	
	Thickest layer	0.00	Thickest layer	0.03
	Bottom layer	0.00	Bottom layer	0.09
857C: Frogcreek-----	Poor		Fair	
	Thickest layer	0.00	Thickest layer	0.03
	Bottom layer	0.00	Bottom layer	0.09
873B: Stanberry-----	Poor		Fair	
	Thickest layer	0.00	Thickest layer	0.03
	Bottom layer	0.00	Bottom layer	0.07
873C: Stanberry-----	Poor		Fair	
	Thickest layer	0.00	Thickest layer	0.03
	Bottom layer	0.00	Bottom layer	0.07
873D: Stanberry-----	Poor		Fair	
	Thickest layer	0.00	Thickest layer	0.03
	Bottom layer	0.00	Bottom layer	0.07

Table 20a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
905A:				
Cublake-----	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.08
926A:				
Flink-----	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.59
943D:				
Stanberry-----	Poor		Fair	
	Thickest layer	0.00	Thickest layer	0.03
	Bottom layer	0.00	Bottom layer	0.07
Greenwood-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
948A:				
Billyboy-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.00
	Bottom layer	0.08	Bottom layer	0.50
970C:				
Keweenaw-----	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.10
	Thickest layer	0.00	Thickest layer	0.11
Pence-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.03
	Bottom layer	0.08	Bottom layer	0.50
Greenwood-----	Not rated		Not rated	
970E:				
Keweenaw-----	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.10
	Thickest layer	0.00	Thickest layer	0.11
Pence-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.03
	Bottom layer	0.08	Bottom layer	0.50
Greenwood-----	Not rated		Not rated	
1070C:				
Fremstadt-----	Poor		Fair	
	Thickest layer	0.00	Bottom layer	0.07
	Bottom layer	0.00	Thickest layer	0.07
Cress-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.08
	Bottom layer	0.16	Bottom layer	0.50
1070D:				
Fremstadt-----	Poor		Fair	
	Thickest layer	0.00	Bottom layer	0.07
	Bottom layer	0.00	Thickest layer	0.07

Table 20a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
1070D:				
Cress-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.08
	Bottom layer	0.16	Bottom layer	0.50
1080B:				
Spoonerhill-----	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.10
	Thickest layer	0.00	Thickest layer	0.10
Spoonerhill, stony--	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.11
	Thickest layer	0.00	Thickest layer	0.11
Cress-----	Fair		Fair	
	Thickest layer	0.00	Thickest layer	0.08
	Bottom layer	0.16	Bottom layer	0.50
1653C:				
Stanberry-----	Poor		Fair	
	Thickest layer	0.00	Thickest layer	0.03
	Bottom layer	0.00	Bottom layer	0.07
Parkfalls-----	Poor		Fair	
	Thickest layer	0.00	Thickest layer	0.03
	Bottom layer	0.00	Bottom layer	0.07
Wozny-----	Poor		Fair	
	Thickest layer	0.00	Thickest layer	0.00
	Bottom layer	0.00	Bottom layer	0.09
2015:				
Pits-----	Not rated		Not rated	
2050:				
Landfill-----	Not rated		Not rated	
3011A:				
Barronett-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3125A:				
Meehan-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.48
	Thickest layer	0.00	Bottom layer	0.82
3126A:				
Wurtsmith-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.54
	Thickest layer	0.00	Bottom layer	0.82
3276A:				
Au Gres-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.72
	Thickest layer	0.00	Bottom layer	0.86
3312B:				
Glendenning, very stony-----	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.03
	Thickest layer	0.00	Thickest layer	0.04

Table 20a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
3312B: Glendenning-----	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.03
	Thickest layer	0.00	Thickest layer	0.04
3336A: Fenander-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
3403A: Loxley-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
Beseman-----	Poor		Poor	
	Bottom layer	0.00	Bottom layer	0.00
	Thickest layer	0.00	Thickest layer	0.00
Dawson-----	Poor		Fair	
	Thickest layer	0.00	Thickest layer	0.00
	Bottom layer	0.00	Bottom layer	0.64
3424C: Frogcreek-----	Poor		Fair	
	Thickest layer	0.00	Thickest layer	0.03
	Bottom layer	0.00	Bottom layer	0.09
Magroc-----	Poor		Fair	
	Thickest layer	0.00	Bottom layer	0.10
	Bottom layer	0.00	Thickest layer	0.10
Stinnett-----	Poor		Fair	
	Thickest layer	0.00	Thickest layer	0.00
	Bottom layer	0.00	Bottom layer	0.09
Rock outcrop-----	Not rated		Not rated	
3446A: Newson-----	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.82
	Thickest layer	0.00	Thickest layer	0.82
3448B: Grettum-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.36
	Thickest layer	0.00	Bottom layer	0.58
3448C: Grettum-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.36
	Thickest layer	0.00	Bottom layer	0.58
3516A: Slimlake-----	Poor		Fair	
	Bottom layer	0.00	Thickest layer	0.54
	Thickest layer	0.00	Bottom layer	0.79
3629B: Perida-----	Poor		Fair	
	Bottom layer	0.00	Bottom layer	0.58
	Thickest layer	0.00	Thickest layer	0.72

Table 20a.--Construction Materials--Continued

Map symbol and soil name	Potential as source of gravel		Potential as source of sand	
	Rating class	Value	Rating class	Value
M-W: Miscellaneous water	Not rated		Not rated	
W: Water-----	Not rated		Not rated	



Table 20b.--Construction Materials

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. "Not rated" indicates that data are not available or that no rating is applicable. See text for further explanation of ratings in this table)

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3A:						
Totagatic-----	Poor		Poor		Poor	
	Too sandy	0.00	Depth to	0.00	Too sandy	0.00
	Low content of organic matter	0.12	saturated zone		Depth to	0.00
	Too acid	0.68			saturated zone	
Bowstring-----	Good		Poor		Poor	
			Depth to	0.00	Depth to	0.00
			saturated zone		saturated zone	
					Content of organic matter	0.00
Ausable-----	Poor		Poor		Poor	
	Too sandy	0.00	Depth to	0.00	Too sandy	0.00
	Low content of organic matter	0.12	saturated zone		Depth to	0.00
	Too acid	0.97			saturated zone	
22A:						
Comstock-----	Fair		Poor		Poor	
	Low content of organic matter	0.12	Depth to	0.00	Depth to	0.00
	Too acid	0.54	saturated zone		saturated zone	
	Water erosion	0.90			Too acid	0.98
24A:						
Poskin-----	Fair		Poor		Poor	
	Low content of organic matter	0.12	Depth to	0.00	Depth to	0.00
	Too acid	0.68	saturated zone		saturated zone	
	Water erosion	0.90			Hard to reclaim (rock fragments)	0.68
27A:						
Scott Lake-----	Fair		Fair		Fair	
	Low content of organic matter	0.12	Depth to	0.89	Hard to reclaim (rock fragments)	0.32
	Too acid	0.68	saturated zone		Depth to	0.89
	Droughty	0.95			saturated zone	
					Rock fragments	0.97
28B:						
Haugen, very stony--	Fair		Fair		Poor	
	Low content of organic matter	0.12	Depth to	0.53	Hard to reclaim (dense layer)	0.00
	Too acid	0.54	saturated zone		Rock fragments	0.00
					Depth to	0.53
					saturated zone	
					Hard to reclaim (rock fragments)	0.92
					Too acid	0.98

Table 20b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
28B: Haugen-----	Fair		Fair		Poor	
	Low content of organic matter	0.12	Depth to saturated zone	0.53	Hard to reclaim (dense layer)	0.00
	Too acid	0.54			Rock fragments	0.00
					Depth to saturated zone	0.53
					Hard to reclaim (rock fragments)	0.92
					Too acid	0.98
Rosholt, very stony	Fair		Good		Fair	
	Low content of organic matter	0.12			Rock fragments	0.12
	Droughty	0.60			Hard to reclaim (rock fragments)	0.32
	Too acid	0.68				
Rosholt-----	Fair		Good		Fair	
	Low content of organic matter	0.12			Rock fragments	0.12
	Droughty	0.67			Hard to reclaim (rock fragments)	0.50
	Too acid	0.68				
28C: Haugen, very stony--	Fair		Fair		Poor	
	Low content of organic matter	0.12	Depth to saturated zone	0.53	Hard to reclaim (dense layer)	0.00
	Too acid	0.54			Rock fragments	0.00
					Depth to saturated zone	0.53
					Hard to reclaim (rock fragments)	0.92
					Slope	0.96
					Too acid	0.98
Haugen-----	Fair		Fair		Poor	
	Low content of organic matter	0.12	Depth to saturated zone	0.53	Hard to reclaim (dense layer)	0.00
	Too acid	0.54			Rock fragments	0.00
					Depth to saturated zone	0.53
					Hard to reclaim (rock fragments)	0.92
					Slope	0.96
					Too acid	0.98
Rosholt, very stony	Fair		Good		Fair	
	Low content of organic matter	0.12			Rock fragments	0.12
	Droughty	0.60			Hard to reclaim (rock fragments)	0.32
	Too acid	0.68			Slope	0.96
Rosholt-----	Fair		Good		Fair	
	Low content of organic matter	0.12			Rock fragments	0.12
	Droughty	0.67			Hard to reclaim (rock fragments)	0.50
	Too acid	0.68			Slope	0.96

Table 20b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material	Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features
33B: Chetek-----	Poor		Good		Poor
	Too sandy	0.00			Too sandy
	Droughty	0.06			Rock fragments
	Low content of organic matter	0.12			Hard to reclaim
	Too acid	0.84			(rock fragments)
33C: Chetek-----	Poor		Good		Poor
	Too sandy	0.00			Too sandy
	Droughty	0.06			Rock fragments
	Low content of organic matter	0.12			Hard to reclaim
	Too acid	0.84			(rock fragments)
					Slope
38A: Rosholt-----	Fair		Good		Fair
	Low content of organic matter	0.12			Rock fragments
	Droughty	0.67			Hard to reclaim
	Too acid	0.68			(rock fragments)
38B: Rosholt-----	Fair		Good		Fair
	Low content of organic matter	0.12			Rock fragments
	Droughty	0.67			Hard to reclaim
	Too acid	0.68			(rock fragments)
38C: Rosholt-----	Fair		Good		Fair
	Low content of organic matter	0.12			Rock fragments
	Droughty	0.67			Hard to reclaim
	Too acid	0.68			(rock fragments)
					Slope
38D: Rosholt-----	Fair		Fair Slope	0.98	Poor
	Low content of organic matter	0.12			Slope
	Droughty	0.67			Rock fragments
	Too acid	0.68			Hard to reclaim
					(rock fragments)
42D: Amery-----	Fair		Fair Slope	0.98	Poor
	Low content of organic matter	0.12			Slope
	Too acid	0.54			Rock fragments
					Hard to reclaim
					(dense layer)
					Hard to reclaim
					(rock fragments)
					Too acid
43B: Antigo-----	Fair		Good		Fair
	Low content of organic matter	0.12			Hard to reclaim
	Too acid	0.68			(rock fragments)
	Water erosion	0.90			

Table 20b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
43C: Antigo-----	Fair		Good		Fair	
	Low content of organic matter	0.12			Slope	0.63
	Too acid	0.68			Hard to reclaim (rock fragments)	0.68
	Water erosion	0.90				
43D: Antigo-----	Fair		Fair		Poor	
	Low content of organic matter	0.12	Slope	0.08	Slope	0.00
	Too acid	0.68			Hard to reclaim (rock fragments)	0.68
	Water erosion	0.90				
48A: Brill-----	Fair		Fair		Fair	
	Low content of organic matter	0.12	Depth to saturated zone	0.14	Depth to saturated zone	0.14
	Too acid	0.68			Hard to reclaim (rock fragments)	0.68
	Water erosion	0.90				
63A: Crystal Lake-----	Fair		Fair		Fair	
	Low content of organic matter	0.12	Depth to saturated zone	0.53	Depth to saturated zone	0.53
	Too acid	0.54			Too acid	0.98
	Water erosion	0.90				
63B: Crystal Lake-----	Fair		Fair		Fair	
	Low content of organic matter	0.12	Depth to saturated zone	0.53	Depth to saturated zone	0.53
	Too acid	0.54			Too acid	0.98
	Water erosion	0.90				
63C: Crystal Lake-----	Fair		Fair		Fair	
	Low content of organic matter	0.12	Depth to saturated zone	0.53	Depth to saturated zone	0.53
	Too acid	0.54			Slope	0.96
	Water erosion	0.90			Too acid	0.98
63E: Crystal Lake-----	Fair		Poor		Poor	
	Low content of organic matter	0.12	Slope	0.00	Slope	0.00
	Too acid	0.54	Depth to saturated zone	0.89	Depth to saturated zone	0.89
	Water erosion	0.90			Too acid	0.98
64A: Totagatic-----	Poor		Poor		Poor	
	Too sandy	0.00	Depth to saturated zone	0.00	Too sandy	0.00
	Low content of organic matter	0.12			Depth to saturated zone	0.00
	Too acid	0.68				

Table 20b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
64A: Winterfield-----	Poor		Poor		Poor	
	Too sandy	0.00	Depth to	0.00	Too sandy	0.00
	Wind erosion	0.00	saturated zone		Depth to	0.00
	Low content of organic matter	0.12			saturated zone	
	Droughty	0.48			Rock fragments	0.88
69B: Keweenaw-----	Poor		Good		Fair	
	Wind erosion	0.00			Too sandy	0.04
	Too sandy	0.04			Rock fragments	0.88
	Low content of organic matter	0.12				
	Too acid	0.68				
Sayner-----	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00			Rock fragments	0.00
	Droughty	0.01			Hard to reclaim	0.50
	Low content of organic matter	0.12			(rock fragments)	
	Too acid	0.54				
Vilas-----	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00			Rock fragments	0.97
	Low content of organic matter	0.12				
	Too acid	0.68				
	Droughty	0.96				
69C: Keweenaw-----	Poor		Good		Fair	
	Wind erosion	0.00			Too sandy	0.04
	Too sandy	0.04			Slope	0.84
	Low content of organic matter	0.12			Rock fragments	0.88
	Too acid	0.68				
Sayner-----	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00			Rock fragments	0.00
	Droughty	0.01			Hard to reclaim	0.50
	Low content of organic matter	0.12			(rock fragments)	
	Too acid	0.54			Slope	0.84
Vilas-----	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00			Slope	0.84
	Low content of organic matter	0.12			Rock fragments	0.97
	Too acid	0.68				
	Droughty	0.96				

Table 20b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material	Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features
69E:					
Keweenaw-----	Poor		Poor		Poor
	Wind erosion	0.00	Slope	0.00	Slope
	Too sandy	0.04			Too sandy
	Low content of organic matter	0.12			Rock fragments
	Too acid	0.68			
Sayner-----	Poor		Poor		Poor
	Too sandy	0.00	Slope	0.00	Slope
	Wind erosion	0.00			Too sandy
	Droughty	0.01			Rock fragments
	Low content of organic matter	0.12			Hard to reclaim (rock fragments)
	Too acid	0.54			
Vilas-----	Poor		Poor		Poor
	Too sandy	0.00	Slope	0.00	Slope
	Wind erosion	0.00			Too sandy
	Low content of organic matter	0.12			Rock fragments
	Too acid	0.68			
	Droughty	0.96			
74B:					
Vilas-----	Poor		Good		Poor
	Too sandy	0.00			Too sandy
	Wind erosion	0.00			Rock fragments
	Low content of organic matter	0.12			
	Too acid	0.68			
	Droughty	0.96			
74C:					
Vilas-----	Poor		Good		Poor
	Too sandy	0.00			Too sandy
	Wind erosion	0.00			Slope
	Low content of organic matter	0.12			Rock fragments
	Too acid	0.68			
	Droughty	0.96			
74D:					
Vilas-----	Poor		Fair		Poor
	Too sandy	0.00	Slope	0.08	Slope
	Wind erosion	0.00			Too sandy
	Low content of organic matter	0.12			Rock fragments
	Too acid	0.68			
	Droughty	0.96			
100B:					
Menahga-----	Poor		Good		Poor
	Wind erosion	0.00			Too sandy
	Too sandy	0.00			Too acid
	Low content of organic matter	0.12			
	Droughty	0.23			
	Too acid	0.50			

Table 20b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
100C: Menahga-----	Poor		Good		Poor	
	Wind erosion	0.00			Too sandy	0.00
	Too sandy	0.00			Too acid	0.88
	Low content of organic matter	0.12			Slope	0.96
	Too acid	0.50				
	Droughty	0.60				
100D: Menahga-----	Poor		Fair		Poor	
	Wind erosion	0.00	Slope	0.32	Slope	0.00
	Too sandy	0.00			Too sandy	0.00
	Low content of organic matter	0.12			Too acid	0.88
	Too acid	0.50				
	Droughty	0.60				
127D: Amery-----	Fair		Fair		Poor	
	Low content of organic matter	0.12	Slope	0.98	Slope	0.00
	Too acid	0.54			Rock fragments	0.00
					Hard to reclaim (dense layer)	0.03
					Hard to reclaim (rock fragments)	0.92
					Too acid	0.98
Rosholt-----	Fair		Fair		Poor	
	Low content of organic matter	0.12	Slope	0.98	Slope	0.00
	Droughty	0.60			Rock fragments	0.12
	Too acid	0.68			Hard to reclaim (rock fragments)	0.32
127E: Amery-----	Fair		Poor		Poor	
	Low content of organic matter	0.12	Slope	0.00	Slope	0.00
	Too acid	0.54			Rock fragments	0.00
					Hard to reclaim (dense layer)	0.03
					Hard to reclaim (rock fragments)	0.92
					Too acid	0.98
Rosholt-----	Fair		Poor		Poor	
	Low content of organic matter	0.12	Slope	0.00	Slope	0.00
	Droughty	0.60			Rock fragments	0.12
	Too acid	0.68			Hard to reclaim (rock fragments)	0.32
156B: Magnor, very stony--	Fair		Poor		Poor	
	Low content of organic matter	0.12	Depth to saturated zone	0.00	Hard to reclaim (dense layer)	0.00
	Too acid	0.20			Depth to saturated zone	0.00
	Water erosion	0.90			Rock fragments	0.00
					Hard to reclaim (rock fragments)	0.92

Table 20b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
156B: Magnor-----	Fair		Poor		Poor	
	Low content of organic matter	0.12	Depth to saturated zone	0.00	Hard to reclaim (dense layer)	0.00
	Too acid	0.20			Depth to saturated zone	0.00
	Water erosion	0.90			Rock fragments Hard to reclaim (rock fragments)	0.00 0.92
157B: Freeon, very stony--	Fair		Poor		Poor	
	Low content of organic matter	0.12	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Too acid	0.68			Rock fragments	0.00
	Water erosion	0.90			Hard to reclaim (rock fragments)	0.92
Freeon-----	Fair		Poor		Poor	
	Low content of organic matter	0.12	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Too acid	0.61			Rock fragments	0.00
	Water erosion	0.90			Hard to reclaim (rock fragments)	0.92
157C: Freeon, very stony--	Fair		Poor		Poor	
	Low content of organic matter	0.12	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Too acid	0.68			Rock fragments	0.00
	Water erosion	0.90			Hard to reclaim (rock fragments)	0.92
					Slope	0.96
Freeon-----	Fair		Poor		Poor	
	Low content of organic matter	0.12	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Too acid	0.61			Rock fragments	0.00
	Water erosion	0.90			Hard to reclaim (rock fragments)	0.92
					Slope	0.96
160A: Oesterle-----	Fair		Poor		Poor	
	Low content of organic matter	0.12	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Too acid	0.68			Rock fragments	0.12
	Droughty	0.91			Hard to reclaim (rock fragments)	0.32
182B: Padus-----	Fair		Good		Fair	
	Low content of organic matter	0.12			Hard to reclaim (rock fragments)	0.68
	Too acid	0.54			Rock fragments	0.98
					Too acid	0.98



Table 20b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material	Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features
182C: Padus-----	Fair		Good		Fair
	Low content of organic matter	0.12			Slope
	Too acid	0.54			Hard to reclaim
					(rock fragments)
					Rock fragments
					Too acid
					0.63
					0.68
					0.98
					0.98
192A: Worcester-----	Fair		Poor		Poor
	Low content of organic matter	0.12	Depth to saturated zone	0.00	Depth to saturated zone
	Too acid	0.54			Rock fragments
	Droughty	0.96			Hard to reclaim
					(rock fragments)
					0.12
					0.68
193A: Minocqua-----	Fair		Poor		Poor
	Low content of organic matter	0.12	Depth to saturated zone	0.00	Depth to saturated zone
	Too acid	0.68			Rock fragments
	Water erosion	0.99			Hard to reclaim
					(rock fragments)
					0.12
					0.68
215B: Pence-----	Poor		Good		Poor
	Too sandy	0.00			Too sandy
	Low content of organic matter	0.12			Rock fragments
	Droughty	0.26			Hard to reclaim
	Too acid	0.54			(rock fragments)
					0.00
					0.00
					0.32
215C: Pence-----	Poor		Good		Poor
	Too sandy	0.00			Too sandy
	Low content of organic matter	0.12			Rock fragments
	Droughty	0.26			Hard to reclaim
	Too acid	0.54			(rock fragments)
					Slope
					0.63
215D: Pence-----	Poor		Fair		Poor
	Too sandy	0.00	Slope	0.08	Slope
	Low content of organic matter	0.12			Too sandy
	Droughty	0.26			Rock fragments
	Too acid	0.54			Hard to reclaim
					(rock fragments)
					0.32
315A: Rib-----	Fair		Poor		Poor
	Low content of organic matter	0.12	Depth to saturated zone	0.00	Depth to saturated zone
	Too acid	0.88			Hard to reclaim
	Water erosion	0.90			(rock fragments)
					0.68
337A: Plover-----	Fair		Poor		Poor
	Low content of organic matter	0.12	Depth to saturated zone	0.00	Depth to saturated zone
	Too acid	0.68			
					0.00

Table 20b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
368B:						
Mahtomedi-----	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00			Rock fragments	0.00
	Droughty	0.00			Hard to reclaim	0.92
	Low content of organic matter	0.12			(rock fragments)	
	Too acid	0.84				
Cress-----	Fair		Good		Fair	
	Low content of organic matter	0.12			Rock fragments	0.02
	Too sandy	0.22			Too sandy	0.22
	Droughty	0.40			Hard to reclaim	0.32
	Too acid	0.54			(rock fragments)	
					Too acid	0.98
368C:						
Mahtomedi-----	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00			Rock fragments	0.00
	Droughty	0.00			Hard to reclaim	0.92
	Low content of organic matter	0.12			(rock fragments)	
	Too acid	0.84			Slope	0.96
Cress-----	Fair		Good		Fair	
	Low content of organic matter	0.12			Rock fragments	0.02
	Too sandy	0.22			Too sandy	0.22
	Droughty	0.40			Hard to reclaim	0.32
	Too acid	0.54			(rock fragments)	
					Slope	0.96
					Too acid	0.98
368D:						
Mahtomedi-----	Poor		Fair		Poor	
	Too sandy	0.00	Slope	0.50	Too sandy	0.00
	Wind erosion	0.00			Slope	0.00
	Droughty	0.00			Rock fragments	0.00
	Low content of organic matter	0.12			Hard to reclaim	0.92
	Too acid	0.84			(rock fragments)	
Cress-----	Fair		Fair		Poor	
	Low content of organic matter	0.12	Slope	0.50	Slope	0.00
	Too sandy	0.22			Rock fragments	0.02
	Droughty	0.40			Too sandy	0.22
	Too acid	0.54			Hard to reclaim	0.32
					(rock fragments)	
					Too acid	0.98
371A:						
Croswell-----	Poor		Fair		Poor	
	Too sandy	0.00	Depth to	0.53	Too sandy	0.00
	Wind erosion	0.00	saturated zone		Depth to	0.53
	Low content of organic matter	0.12			saturated zone	
	Droughty	0.33			Rock fragments	0.97
	Too acid	0.50				

Table 20b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material	Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features
380B:					
Cress-----	Fair		Good		Fair
	Low content of organic matter	0.12			Rock fragments
	Too sandy	0.22			Too sandy
	Droughty	0.40			Hard to reclaim
	Too acid	0.54			(rock fragments)
					Too acid
Rosholt-----	Fair		Good		Fair
	Low content of organic matter	0.12			Rock fragments
	Droughty	0.67			Hard to reclaim
	Too acid	0.68			(rock fragments)
380C:					
Cress-----	Fair		Good		Fair
	Low content of organic matter	0.12			Rock fragments
	Too sandy	0.22			Too sandy
	Droughty	0.40			Hard to reclaim
	Too acid	0.54			(rock fragments)
					Slope
					Too acid
Rosholt-----	Fair		Good		Fair
	Low content of organic matter	0.12			Rock fragments
	Droughty	0.67			Hard to reclaim
	Too acid	0.68			(rock fragments)
					Slope
380D:					
Cress-----	Fair		Fair		Poor
	Low content of organic matter	0.12	Slope	0.32	Slope
	Too sandy	0.22			Rock fragments
	Droughty	0.40			Too sandy
	Too acid	0.54			Hard to reclaim
					(rock fragments)
					Too acid
Rosholt-----	Fair		Fair		Poor
	Low content of organic matter	0.12	Slope	0.32	Slope
	Droughty	0.67			Rock fragments
	Too acid	0.68			Hard to reclaim
					(rock fragments)
383B:					
Mahtomedi-----	Poor		Good		Poor
	Too sandy	0.00			Too sandy
	Wind erosion	0.00			Rock fragments
	Droughty	0.00			Hard to reclaim
	Low content of organic matter	0.12			(rock fragments)
	Too acid	0.84			
383C:					
Mahtomedi-----	Poor		Good		Poor
	Too sandy	0.00			Too sandy
	Wind erosion	0.00			Rock fragments
	Droughty	0.00			Hard to reclaim
	Low content of organic matter	0.12			(rock fragments)
	Too acid	0.84			Slope

Table 20b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
383D: Mahtomedi-----	Poor		Fair		Poor	
	Too sandy	0.00	Slope	0.32	Too sandy	0.00
	Wind erosion	0.00			Slope	0.00
	Droughty	0.00			Rock fragments	0.00
	Low content of organic matter	0.12			Hard to reclaim (rock fragments)	0.92
	Too acid	0.84				
396B: Friendship-----	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00				
	Droughty	0.10				
	Low content of organic matter	0.12				
	Too acid	0.68				
Wurtsmith-----	Poor		Fair		Poor	
	Too sandy	0.00	Depth to	0.53	Too sandy	0.00
	Wind erosion	0.00	saturated zone		Depth to	0.53
	Low content of organic matter	0.12			saturated zone	
	Droughty	0.13			Too acid	0.76
	Too acid	0.50			Rock fragments	0.97
Grayling-----	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00				
	Droughty	0.00				
	Low content of organic matter	0.12				
	Too acid	0.50				
397A: Perchlake-----	Poor		Poor		Poor	
	Too sandy	0.00	Depth to	0.00	Too sandy	0.00
	Wind erosion	0.00	saturated zone		Depth to	0.00
	Low content of organic matter	0.12			saturated zone	
	Too acid	0.68				
	Droughty	0.75				
399B: Grayling-----	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00				
	Droughty	0.00				
	Low content of organic matter	0.12				
	Too acid	0.50				
399C: Grayling-----	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00			Slope	0.96
	Droughty	0.00				
	Low content of organic matter	0.12				
	Too acid	0.50				

Table 20b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
399D: Grayling-----	Poor Too sandy Wind erosion Droughty Low content of organic matter Too acid	 0.00 0.00 0.00 0.12 0.50	Fair Slope	 0.32	Poor Too sandy Slope	 0.00 0.00
405A: Lupton-----	Good		Poor Depth to saturated zone	 0.00	Poor Depth to saturated zone Content of organic matter	 0.00 0.00
Cathro-----	Fair Too acid	 0.99	Poor Depth to saturated zone	 0.00	Poor Depth to saturated zone Content of organic matter	 0.00 0.00
Tawas-----	Good		Poor Depth to saturated zone	 0.00	Poor Depth to saturated zone Content of organic matter	 0.00 0.00
406A: Loxley-----	Fair Too acid	 0.50	Poor Depth to saturated zone	 0.00	Poor Depth to saturated zone Content of organic matter Too acid	 0.00 0.00 0.12
407A: Seelyeville-----	Fair Too acid	 0.88	Poor Depth to saturated zone	 0.00	Poor Depth to saturated zone Content of organic matter	 0.00 0.00
Markey-----	Good		Poor Depth to saturated zone	 0.00	Poor Depth to saturated zone Content of organic matter	 0.00 0.00
410A: Seelyeville-----	Fair Too acid	 0.88	Poor Depth to saturated zone	 0.00	Poor Depth to saturated zone Content of organic matter	 0.00 0.00
Cathro-----	Fair Too acid	 0.99	Poor Depth to saturated zone	 0.00	Poor Depth to saturated zone Content of organic matter	 0.00 0.00

Table 20b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
412A: Rifle-----	Good		Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Content of organic matter	0.00 0.00
Tacoosh-----	Good		Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Content of organic matter	0.00 0.00
415A: Greenwood-----	Fair Too acid	0.50	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Content of organic matter Too acid	0.00 0.00 0.12
439B: Graycalm-----	Poor Too sandy Wind erosion Low content of organic matter Too acid Droughty	0.00 0.00 0.12 0.50 0.75	Good		Poor Too sandy Too acid	0.00 0.99
Menahga-----	Poor Wind erosion Too sandy Low content of organic matter Too acid Droughty	0.00 0.00 0.12 0.50 0.61	Good		Poor Too sandy Too acid	0.00 0.88
439C: Graycalm-----	Poor Too sandy Wind erosion Low content of organic matter Too acid Droughty	0.00 0.00 0.12 0.50 0.75	Good		Poor Too sandy Slope Too acid	0.00 0.96 0.99
Menahga-----	Poor Wind erosion Too sandy Low content of organic matter Too acid Droughty	0.00 0.00 0.12 0.50 0.61	Good		Poor Too sandy Too acid Slope	0.00 0.88 0.96

Table 20b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
439D:						
Graycalm-----	Poor		Fair		Poor	
	Too sandy	0.00	Slope	0.32	Too sandy	0.00
	Wind erosion	0.00			Slope	0.00
	Low content of organic matter	0.12			Too acid	0.99
	Too acid	0.50				
	Droughty	0.75				
Menahga-----	Poor		Fair		Poor	
	Wind erosion	0.00	Slope	0.32	Slope	0.00
	Too sandy	0.00			Too sandy	0.00
	Low content of organic matter	0.12			Too acid	0.88
	Too acid	0.50				
	Droughty	0.61				
441C:						
Freeon-----	Fair		Poor		Poor	
	Low content of organic matter	0.12	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Too acid	0.61			Rock fragments	0.00
	Water erosion	0.90			Slope	0.63
					Hard to reclaim (rock fragments)	0.92
Cathro-----	Not rated		Poor		Not rated	
			Depth to saturated zone	0.00		
442C:						
Haugen-----	Fair		Fair		Poor	
	Low content of organic matter	0.12	Depth to saturated zone	0.53	Hard to reclaim (dense layer)	0.00
	Too acid	0.54			Rock fragments	0.00
					Depth to saturated zone	0.53
					Hard to reclaim (rock fragments)	0.92
					Too acid	0.98
Greenwood-----	Fair		Poor		Poor	
	Too acid	0.50	Depth to saturated zone	0.00	Depth to saturated zone	0.00
					Content of organic matter	0.00
					Too acid	0.12
443D:						
Amery-----	Fair		Poor		Poor	
	Low content of organic matter	0.12	Slope	0.00	Slope	0.00
	Too acid	0.54			Rock fragments	0.00
					Hard to reclaim (dense layer)	0.03
					Hard to reclaim (rock fragments)	0.92
					Too acid	0.98

Table 20b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
443D: Greenwood-----	Fair Too acid	0.50	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Content of organic matter Too acid	0.00 0.00 0.12
461A: Bowstring-----	Good		Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Content of organic matter	0.00 0.00
484A: Greenwood-----	Fair Too acid	0.50	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Content of organic matter Too acid	0.00 0.00 0.12
Beseman-----	Fair Too acid Water erosion	0.61 0.90	Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Content of organic matter Too acid	0.00 0.00 0.12
495B: Karlsborg-----	Poor Too sandy Wind erosion Low content of organic matter Too acid	0.00 0.00 0.12 0.68	Fair Depth to saturated zone Shrink-swell	0.14 0.95	Poor Too sandy Depth to saturated zone	0.00 0.14
Grettum-----	Poor Wind erosion Too sandy Low content of organic matter Too acid Droughty	0.00 0.00 0.12 0.61 0.98	Good		Poor Too sandy Too acid	0.00 0.99
Perida-----	Poor Too sandy Wind erosion Low content of organic matter Too acid	0.00 0.00 0.12 0.61	Fair Shrink-swell	0.99	Poor Too sandy Too acid	0.00 0.99
495C: Karlsborg-----	Poor Too sandy Wind erosion Low content of organic matter Too acid	0.00 0.00 0.12 0.68	Fair Depth to saturated zone Shrink-swell	0.14 0.95	Poor Too sandy Depth to saturated zone Slope	0.00 0.14 0.96



Table 20b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
495C: Grettum-----	Poor		Good		Poor	
	Wind erosion	0.00			Too sandy	0.00
	Too sandy	0.00			Slope	0.96
	Low content of organic matter	0.12			Too acid	0.99
	Too acid	0.61				
	Droughty	0.98				
Perida-----	Poor		Fair		Poor	
	Too sandy	0.00	Shrink-swell	0.99	Too sandy	0.00
	Wind erosion	0.00			Slope	0.96
	Low content of organic matter	0.12			Too acid	0.99
	Too acid	0.61				
495D: Karlsborg-----	Poor		Fair		Poor	
	Too sandy	0.00	Depth to	0.14	Too sandy	0.00
	Wind erosion	0.00	saturated zone		Slope	0.00
	Low content of organic matter	0.12	Slope	0.32	Depth to	0.14
	Too acid	0.68	Shrink-swell	0.95	saturated zone	
Grettum-----	Poor		Fair		Poor	
	Wind erosion	0.00	Slope	0.32	Too sandy	0.00
	Too sandy	0.00			Slope	0.00
	Low content of organic matter	0.12			Too acid	0.99
	Too acid	0.61				
	Droughty	0.98				
Perida-----	Poor		Fair		Poor	
	Too sandy	0.00	Slope	0.32	Too sandy	0.00
	Wind erosion	0.00	Shrink-swell	0.99	Slope	0.00
	Low content of organic matter	0.12			Too acid	0.99
	Too acid	0.61				
497A: Meenon-----	Poor		Poor		Poor	
	Too sandy	0.00	Depth to	0.00	Too sandy	0.00
	Wind erosion	0.00	saturated zone		Depth to	0.00
	Low content of organic matter	0.12			saturated zone	
	Too acid	0.80			Rock fragments	0.97
	Droughty	0.97				
515A: Manitowish-----	Poor		Fair		Poor	
	Too sandy	0.00	Depth to	0.89	Too sandy	0.00
	Low content of organic matter	0.12	saturated zone		Rock fragments	0.00
	Droughty	0.37			Hard to reclaim (rock fragments)	0.68
	Too acid	0.54			Depth to	0.89
					saturated zone	

Table 20b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
521A: Dody-----	Poor		Poor		Poor	
	Too clayey	0.00	Depth to	0.00	Too clayey	0.00
	Low content of organic matter	0.12	saturated zone		Depth to	0.00
	Too acid	0.68	Low strength	0.00	saturated zone	
			Shrink-swell	0.89		
524E: Rock outcrop-----	Not rated		Not rated		Not rated	
Frogcreek-----	Fair		Poor		Poor	
	Low content of organic matter	0.12	Depth to	0.00	Hard to reclaim (dense layer)	0.00
	Too acid	0.54	saturated zone		Depth to	0.00
	Water erosion	0.99			saturated zone	
					Rock fragments	0.88
					Hard to reclaim (rock fragments)	0.92
Metonga-----	Fair		Poor		Poor	
	Low content of organic matter	0.12	Depth to bedrock	0.00	Slope	0.00
	Too acid	0.50	Slope	0.00	Depth to bedrock	0.58
	Depth to bedrock	0.58			Too acid	0.76
	Droughty	0.87				
	Water erosion	0.99				
542B: Haugen, very stony--	Fair		Fair		Poor	
	Low content of organic matter	0.12	Depth to	0.53	Hard to reclaim (dense layer)	0.00
	Too acid	0.54	saturated zone		Rock fragments	0.00
					Depth to	0.53
					saturated zone	
					Hard to reclaim (rock fragments)	0.92
					Too acid	0.98
Haugen-----	Fair		Fair		Poor	
	Low content of organic matter	0.12	Depth to	0.53	Hard to reclaim (dense layer)	0.00
	Too acid	0.54	saturated zone		Rock fragments	0.00
					Depth to	0.53
					saturated zone	
					Hard to reclaim (rock fragments)	0.92
					Too acid	0.98
542C: Haugen, very stony--	Fair		Fair		Poor	
	Low content of organic matter	0.12	Depth to	0.53	Hard to reclaim (dense layer)	0.00
	Too acid	0.54	saturated zone		Rock fragments	0.00
					Depth to	0.53
					saturated zone	
					Hard to reclaim (rock fragments)	0.92
					Slope	0.96
					Too acid	0.98

Table 20b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
542C: Haugen-----	Fair		Fair		Poor	
	Low content of organic matter	0.12	Depth to saturated zone	0.53	Hard to reclaim (dense layer)	0.00
	Too acid	0.54			Rock fragments	0.00
					Depth to saturated zone	0.53
					Hard to reclaim (rock fragments)	0.92
					Slope	0.96
					Too acid	0.98
543B: Anigon-----	Fair		Good		Fair	
	Low content of organic matter	0.12			Hard to reclaim (rock fragments)	0.68
	Too acid	0.68				
	Water erosion	0.90				
543C2: Anigon-----	Fair		Good		Fair	
	Low content of organic matter	0.12			Hard to reclaim (rock fragments)	0.68
	Too acid	0.68			Slope	0.96
	Water erosion	0.90				
544F: Menahga-----	Poor		Poor		Poor	
	Wind erosion	0.00	Slope	0.00	Slope	0.00
	Too sandy	0.00			Too sandy	0.00
	Low content of organic matter	0.12			Too acid	0.88
	Too acid	0.50				
	Droughty	0.60				
Mahtomedi-----	Poor		Poor		Poor	
	Too sandy	0.00	Slope	0.00	Slope	0.00
	Wind erosion	0.00			Too sandy	0.00
	Droughty	0.00			Rock fragments	0.00
	Low content of organic matter	0.12			Hard to reclaim (rock fragments)	0.92
	Too acid	0.84				
555A: Fordum-----	Fair		Poor		Poor	
	Low content of organic matter	0.88	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Water erosion	0.99			Rock fragments	0.88
574B: Sayner-----	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00			Rock fragments	0.00
	Droughty	0.01			Hard to reclaim (rock fragments)	0.50
	Low content of organic matter	0.12				
	Too acid	0.54				

Table 20b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
574C: Sayner-----	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Wind erosion	0.00			Rock fragments	0.00
	Droughty	0.01			Hard to reclaim	0.50
	Low content of organic matter	0.12			(rock fragments)	
	Too acid	0.54			Slope	0.63
574E: Sayner-----	Poor		Poor		Poor	
	Too sandy	0.00	Slope	0.00	Slope	0.00
	Wind erosion	0.00			Too sandy	0.00
	Droughty	0.01			Rock fragments	0.00
	Low content of organic matter	0.12			Hard to reclaim	0.50
	Too acid	0.54			(rock fragments)	
579B: Parkfalls-----	Fair		Poor		Poor	
	Low content of organic matter	0.12	Depth to saturated zone	0.00	Hard to reclaim	0.00
	Droughty	0.39			(dense layer)	
	Too acid	0.68			Depth to saturated zone	0.00
					Rock fragments	0.88
600A: Haplosaprists-----	Not rated		Not rated		Not rated	
Psammaquents-----	Not rated		Not rated		Not rated	
615B: Cress-----	Fair		Good		Fair	
	Low content of organic matter	0.12			Rock fragments	0.02
	Too sandy	0.22			Too sandy	0.22
	Droughty	0.40			Hard to reclaim	0.32
	Too acid	0.54			(rock fragments)	
					Too acid	0.98
615C: Cress-----	Fair		Good		Fair	
	Low content of organic matter	0.12			Rock fragments	0.02
	Too sandy	0.22			Too sandy	0.22
	Droughty	0.40			Hard to reclaim	0.32
	Too acid	0.54			(rock fragments)	
					Slope	0.96
					Too acid	0.98
615D: Cress-----	Fair		Fair		Poor	
	Low content of organic matter	0.12	Slope	0.32	Slope	0.00
	Too sandy	0.22			Rock fragments	0.02
	Droughty	0.40			Too sandy	0.22
	Too acid	0.54			Hard to reclaim	0.32
					(rock fragments)	
					Too acid	0.98

Table 20b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
623A: Capitola-----	Fair		Poor		Poor	
	Low content of organic matter	0.88	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Too acid	0.88			Hard to reclaim (dense layer)	0.03
	Water erosion	0.90			Rock fragments	0.97
	Droughty	0.99				
624A: Ossmer-----	Fair		Poor		Poor	
	Low content of organic matter	0.12	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Too acid	0.68			Hard to reclaim	0.68
	Water erosion	0.99			(rock fragments)	
632A: Aftad-----	Fair		Fair		Fair	
	Too acid	0.68	Depth to saturated zone	0.53	Depth to saturated zone	0.53
	Low content of organic matter	0.88				
	Water erosion	0.90				
632B: Aftad-----	Fair		Fair		Fair	
	Too acid	0.68	Depth to saturated zone	0.53	Depth to saturated zone	0.53
	Low content of organic matter	0.88				
	Water erosion	0.90				
632C: Aftad-----	Fair		Fair		Fair	
	Too acid	0.68	Depth to saturated zone	0.53	Depth to saturated zone	0.53
	Low content of organic matter	0.88			Slope	0.96
	Water erosion	0.90				
633F: Pence-----	Poor		Poor		Poor	
	Too sandy	0.00	Slope	0.00	Slope	0.00
	Low content of organic matter	0.12			Too sandy	0.00
	Droughty	0.26			Rock fragments	0.00
	Too acid	0.54			Hard to reclaim (rock fragments)	0.32
Padus-----	Fair		Poor		Poor	
	Low content of organic matter	0.12	Slope	0.00	Slope	0.00
	Too acid	0.54			Hard to reclaim (rock fragments)	0.68
					Rock fragments	0.98
					Too acid	0.98
648B: Sconsin-----	Fair		Fair		Poor	
	Too acid	0.68	Depth to saturated zone	0.14	Hard to reclaim (dense layer)	0.00
	Low content of organic matter	0.88			Depth to saturated zone	0.14
	Water erosion	0.99				

Table 20b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
670C:						
Keweenaw-----	Fair		Good		Fair	
	Low content of organic matter	0.12			Slope	0.63
	Too acid	0.68			Rock fragments	0.88
Pence-----	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Low content of organic matter	0.12			Rock fragments	0.00
	Droughty	0.26			Hard to reclaim (rock fragments)	0.32
	Too acid	0.54			Slope	0.63
670E:						
Keweenaw-----	Fair		Poor		Poor	
	Low content of organic matter	0.12	Slope	0.00	Slope	0.00
	Too acid	0.68			Rock fragments	0.88
Pence-----	Poor		Poor		Poor	
	Too sandy	0.00	Slope	0.00	Slope	0.00
	Low content of organic matter	0.12			Too sandy	0.00
	Droughty	0.26			Rock fragments	0.00
	Too acid	0.54			Hard to reclaim (rock fragments)	0.32
671B:						
Spoonerhill, stony--	Poor		Fair		Poor	
	Too sandy	0.00	Depth to	0.53	Hard to reclaim (dense layer)	0.00
	Low content of organic matter	0.12	saturated zone		Too sandy	0.00
	Too acid	0.68			Depth to	0.53
	Droughty	0.96			saturated zone	
					Hard to reclaim (rock fragments)	0.98
Spoonerhill-----	Poor		Fair		Poor	
	Too sandy	0.00	Depth to	0.53	Hard to reclaim (dense layer)	0.00
	Low content of organic matter	0.12	saturated zone		Too sandy	0.00
	Too acid	0.68			Depth to	0.53
	Droughty	0.96			saturated zone	
					Hard to reclaim (rock fragments)	0.98
680B:						
Stanberry, stony---	Fair		Fair		Poor	
	Too acid	0.54	Depth to	0.53	Hard to reclaim (dense layer)	0.00
	Droughty	0.94	saturated zone		Depth to	0.53
					saturated zone	
					Too acid	0.98
Pence, stony-----	Poor		Good		Poor	
	Too sandy	0.00			Too sandy	0.00
	Low content of organic matter	0.12			Rock fragments	0.00
	Droughty	0.26			Hard to reclaim (rock fragments)	0.32
	Too acid	0.54				

Table 20b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
683A: Tipler-----	Fair		Fair		Fair	
	Low content of organic matter	0.12	Depth to saturated zone	0.89	Rock fragments	0.12
	Too acid	0.54			Hard to reclaim (rock fragments)	0.68
	Droughty	0.97			Depth to saturated zone	0.89
					Too acid	0.98
706A: Winterfield-----	Poor		Poor		Poor	
	Too sandy	0.00	Depth to saturated zone	0.00	Too sandy	0.00
	Low content of organic matter	0.12			Depth to saturated zone	0.00
	Droughty	0.80			Rock fragments	0.88
	Water erosion	0.99				
Totagatic-----	Poor		Poor		Poor	
	Too sandy	0.00	Depth to saturated zone	0.00	Too sandy	0.00
	Low content of organic matter	0.12			Depth to saturated zone	0.00
	Too acid	0.68				
	Droughty	0.98				
724A: Rib-----	Fair		Poor		Poor	
	Low content of organic matter	0.12	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Too acid	0.88			Hard to reclaim (rock fragments)	0.68
	Water erosion	0.90				
Rock outcrop-----	Not rated		Not rated		Not rated	
726B: Sissabagama-----	Poor		Fair		Poor	
	Wind erosion	0.00	Depth to saturated zone	0.89	Too sandy	0.00
	Too sandy	0.00			Depth to saturated zone	0.89
	Low content of organic matter	0.12				
	Too acid	0.68				
733A: Wozny-----	Fair		Poor		Poor	
	Low content of organic matter	0.88	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Too acid	0.88			Hard to reclaim (rock fragments)	0.92
	Water erosion	0.90			Rock fragments	0.97
					Hard to reclaim (dense layer)	0.97
771A: Lenroot-----	Poor		Fair		Poor	
	Too sandy	0.00	Depth to saturated zone	0.53	Too sandy	0.00
	Wind erosion	0.00			Rock fragments	0.00
	Droughty	0.11			Depth to saturated zone	0.53
	Low content of organic matter	0.12			Hard to reclaim	0.92
	Too acid	0.84			(rock fragments)	

Table 20b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
827A: Scoba-----	Fair		Fair		Fair	
	Low content of organic matter	0.12	Depth to saturated zone	0.53	Hard to reclaim (rock fragments)	0.32
	Too acid	0.68			Depth to saturated zone	0.53
	Droughty	0.74			Rock fragments	0.97
853C: Frogcreek-----	Fair		Poor		Poor	
	Low content of organic matter	0.12	Depth to saturated zone	0.00	Hard to reclaim (dense layer)	0.00
	Too acid	0.54			Depth to saturated zone	0.00
	Water erosion	0.99			Rock fragments	0.88
					Hard to reclaim (rock fragments)	0.92
Stinnett-----	Fair		Poor		Poor	
	Low content of organic matter	0.12	Depth to saturated zone	0.00	Hard to reclaim (dense layer)	0.00
	Too acid	0.54			Depth to saturated zone	0.00
	Water erosion	0.99			Too acid	0.98
Wozny-----	Fair		Poor		Poor	
	Low content of organic matter	0.88	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Too acid	0.88			Hard to reclaim (rock fragments)	0.92
	Water erosion	0.90			Rock fragments	0.97
					Hard to reclaim (dense layer)	0.97
856B: Stinnett-----	Fair		Poor		Poor	
	Low content of organic matter	0.12	Depth to saturated zone	0.00	Hard to reclaim (dense layer)	0.00
	Too acid	0.54			Depth to saturated zone	0.00
	Water erosion	0.99			Too acid	0.98
857B: Frogcreek-----	Fair		Poor		Poor	
	Low content of organic matter	0.12	Depth to saturated zone	0.00	Hard to reclaim (dense layer)	0.00
	Too acid	0.54			Depth to saturated zone	0.00
	Water erosion	0.99			Rock fragments	0.88
					Hard to reclaim (rock fragments)	0.92



Table 20b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
857C: Frogcreek-----	Fair		Poor		Poor	
	Low content of organic matter	0.12	Depth to saturated zone	0.00	Hard to reclaim (dense layer)	0.00
	Too acid	0.54			Depth to saturated zone	0.00
	Water erosion	0.99			Slope	0.84
					Rock fragments	0.88
					Hard to reclaim (rock fragments)	0.92
873B: Stanberry-----	Fair		Fair		Poor	
	Too acid	0.54	Depth to saturated zone	0.53	Hard to reclaim (dense layer)	0.00
	Droughty	0.94			Depth to saturated zone	0.53
					Too acid	0.98
873C: Stanberry-----	Fair		Fair		Poor	
	Too acid	0.54	Depth to saturated zone	0.53	Hard to reclaim (dense layer)	0.00
	Droughty	0.94			Depth to saturated zone	0.53
					Slope	0.63
					Too acid	0.98
873D: Stanberry-----	Fair		Fair		Poor	
	Too acid	0.54	Slope	0.08	Slope	0.00
	Droughty	0.94	Depth to saturated zone	0.53	Hard to reclaim (dense layer)	0.00
					Depth to saturated zone	0.53
					Too acid	0.98
905A: Cublake-----	Poor		Fair		Fair	
	Wind erosion	0.00	Depth to saturated zone	0.89	Too sandy	0.30
	Low content of organic matter	0.12			Too acid	0.76
	Too acid	0.20			Depth to saturated zone	0.89
	Too sandy	0.30			Rock fragments	0.97
	Droughty	0.99				
926A: Flink-----	Poor		Poor		Poor	
	Too sandy	0.00	Depth to saturated zone	0.00	Too sandy	0.00
	Wind erosion	0.00			Depth to saturated zone	0.00
	Low content of organic matter	0.12			Too acid	0.76
	Too acid	0.20				

Table 20b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
943D: Stanberry-----	Fair Too acid Droughty	0.54 0.94	Fair Depth to saturated zone Slope	0.53 0.82	Poor Hard to reclaim (dense layer) Slope Depth to saturated zone Too acid	0.00 0.00 0.53 0.98
Greenwood-----	Not rated		Poor Depth to saturated zone	0.00	Poor Depth to saturated zone Content of organic matter Too acid	0.00 0.00 0.12
948A: Billyboy-----	Fair Low content of organic matter Too acid Water erosion	0.12 0.68 0.99	Fair Depth to saturated zone	0.14	Fair Depth to saturated zone Hard to reclaim (rock fragments)	0.14 0.68
970C: Keweenaw-----	Fair Low content of organic matter Too acid	0.12 0.68	Good		Fair Slope Rock fragments	0.63 0.88
Pence-----	Poor Too sandy Low content of organic matter Droughty Too acid	0.00 0.12 0.26 0.54	Good		Poor Too sandy Rock fragments Hard to reclaim (rock fragments) Slope	0.00 0.00 0.32 0.63
Greenwood-----	Not rated		Poor Depth to saturated zone	0.00	Not rated	
970E: Keweenaw-----	Fair Low content of organic matter Too acid	0.12 0.68	Poor Slope	0.00	Poor Slope Rock fragments	0.00 0.88
Pence-----	Poor Too sandy Low content of organic matter Droughty Too acid	0.00 0.12 0.26 0.54	Poor Slope	0.00	Poor Slope Too sandy Rock fragments Hard to reclaim (rock fragments)	0.00 0.00 0.00 0.32
Greenwood-----	Not rated		Poor Depth to saturated zone	0.00	Not rated	

Table 20b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material	Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features
1070C:					
Fremstadt-----	Fair		Good		Fair
	Too sandy	0.47			Too sandy
	Too acid	0.68			Rock fragments
	Low content of organic matter	0.92			Slope
					0.47
					0.72
					0.84
Cress-----	Fair		Good		Fair
	Low content of organic matter	0.12			Rock fragments
	Too sandy	0.22			Too sandy
	Droughty	0.40			Hard to reclaim (rock fragments)
	Too acid	0.54			Slope
					Too acid
					0.02
					0.22
					0.32
					0.96
					0.98
1070D:					
Fremstadt-----	Fair		Fair		Poor
	Too sandy	0.47	Slope	0.08	Slope
	Too acid	0.68			Too sandy
	Low content of organic matter	0.92			Rock fragments
					0.00
					0.47
					0.72
Cress-----	Fair		Fair		Poor
	Low content of organic matter	0.12	Slope	0.32	Slope
	Too sandy	0.22			Rock fragments
	Droughty	0.40			Too sandy
	Too acid	0.54			Hard to reclaim (rock fragments)
					Too acid
					0.00
					0.02
					0.22
					0.32
					0.98
1080B:					
Spoonerhill-----	Poor		Fair		Poor
	Too sandy	0.00	Depth to	0.53	Hard to reclaim (dense layer)
	Low content of organic matter	0.12	saturated zone		Too sandy
	Too acid	0.68			Rock fragments
	Droughty	0.96			Depth to
					saturated zone
					Hard to reclaim
					(rock fragments)
					0.00
					0.00
					0.03
					0.53
					0.98
Spoonerhill, stony--	Poor		Fair		Poor
	Too sandy	0.00	Depth to	0.53	Hard to reclaim (dense layer)
	Low content of organic matter	0.12	saturated zone		Too sandy
	Too acid	0.68			Depth to
	Droughty	0.96			saturated zone
					Hard to reclaim
					(rock fragments)
					0.00
					0.00
					0.53
					0.98
Cress-----	Fair		Good		Fair
	Low content of organic matter	0.12			Rock fragments
	Too sandy	0.22			Too sandy
	Droughty	0.40			Hard to reclaim (rock fragments)
	Too acid	0.54			Too acid
					0.02
					0.22
					0.32
					0.98

Table 20b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1653C: Stanberry-----	Fair		Fair		Poor	
	Too acid	0.54	Depth to	0.53	Hard to reclaim	0.00
	Droughty	0.94	saturated zone		(dense layer)	
					Depth to	0.53
					saturated zone	
					Slope	0.96
					Too acid	0.98
Parkfalls-----	Fair		Poor		Poor	
	Low content of	0.12	Depth to	0.00	Hard to reclaim	0.00
	organic matter		saturated zone		(dense layer)	
	Droughty	0.39			Depth to	0.00
	Too acid	0.68			saturated zone	
					Rock fragments	0.88
Wozny-----	Fair		Poor		Poor	
	Low content of	0.88	Depth to	0.00	Depth to	0.00
	organic matter		saturated zone		saturated zone	
	Too acid	0.88			Hard to reclaim	0.92
	Water erosion	0.90			(rock fragments)	
					Rock fragments	0.97
					Hard to reclaim	0.97
					(dense layer)	
2015: Pits-----	Not rated		Not rated		Not rated	
2050: Landfill-----	Not rated		Not rated		Not rated	
3011A: Barronett-----	Fair		Poor		Poor	
	Low content of	0.12	Depth to	0.00	Depth to	0.00
	organic matter		saturated zone		saturated zone	
	Too acid	0.68				
	Water erosion	0.90				
3125A: Meehan-----	Poor		Poor		Poor	
	Too sandy	0.00	Depth to	0.00	Too sandy	0.00
	Wind erosion	0.00	saturated zone		Depth to	0.00
	Droughty	0.06			saturated zone	
	Low content of	0.12			Too acid	0.88
	organic matter					
	Too acid	0.50				
3126A: Wurtsmith-----	Poor		Fair		Poor	
	Too sandy	0.00	Depth to	0.53	Too sandy	0.00
	Wind erosion	0.00	saturated zone		Depth to	0.53
	Low content of	0.12			saturated zone	
	organic matter				Too acid	0.76
	Droughty	0.15			Rock fragments	0.97
	Too acid	0.50				

Table 20b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3276A: Au Gres-----	Poor		Poor		Poor	
	Too sandy	0.00	Depth to	0.00	Too sandy	0.00
	Wind erosion	0.00	saturated zone		Depth to	0.00
	Low content of organic matter	0.12			saturated zone	
	Too acid	0.50			Too acid	0.99
	Droughty	0.71				
3312B: Glendenning, very stony-----	Fair		Poor		Poor	
	Low content of organic matter	0.12	Depth to	0.00	Hard to reclaim (dense layer)	0.00
	Too acid	0.68	saturated zone		Depth to	0.00
					saturated zone	
					Rock fragments	0.12
					Hard to reclaim (rock fragments)	0.98
Glendenning-----	Fair		Poor		Poor	
	Low content of organic matter	0.12	Depth to	0.00	Hard to reclaim (dense layer)	0.00
	Too acid	0.68	saturated zone		Depth to	0.00
					saturated zone	
					Rock fragments	0.12
					Hard to reclaim (rock fragments)	0.98
3336A: Fenander-----	Fair		Poor		Poor	
	Low content of organic matter	0.12	Depth to	0.00	Depth to	0.00
	Too acid	0.99	saturated zone		saturated zone	
3403A: Loxley-----	Fair		Poor		Poor	
	Too acid	0.50	Depth to	0.00	Depth to	0.00
			saturated zone		saturated zone	
					Content of	0.00
					organic matter	
					Too acid	0.12
Beseman-----	Fair		Poor		Poor	
	Too acid	0.61	Depth to	0.00	Depth to	0.00
	Water erosion	0.90	saturated zone		saturated zone	
					Content of	0.00
					organic matter	
					Too acid	0.12
Dawson-----	Poor		Poor		Poor	
	Too acid	0.00	Depth to	0.00	Depth to	0.00
	Water erosion	0.99	saturated zone		saturated zone	
					Content of	0.00
					organic matter	
					Too acid	0.12

Table 20b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3424C: Frogcreek-----	Fair		Poor		Poor	
	Low content of organic matter	0.12	Depth to saturated zone	0.00	Hard to reclaim (dense layer)	0.00
	Too acid	0.54			Depth to saturated zone	0.00
	Water erosion	0.99			Rock fragments Hard to reclaim (rock fragments)	0.88 0.92
Magroc-----	Fair		Poor		Poor	
	Low content of organic matter	0.12	Depth to saturated zone	0.00	Depth to saturated zone	0.00
	Too acid	0.68	Depth to bedrock	0.58	Rock fragments	0.50
	Water erosion	0.99			Hard to reclaim (dense layer)	0.54
					Hard to reclaim (rock fragments)	0.92
Stinnett-----	Fair		Poor		Poor	
	Low content of organic matter	0.12	Depth to saturated zone	0.00	Hard to reclaim (dense layer)	0.00
	Too acid	0.54			Depth to saturated zone	0.00
	Water erosion	0.99			Too acid	0.98
Rock outcrop-----	Not rated		Not rated		Not rated	
3446A: Newson-----	Poor		Poor		Poor	
	Too sandy	0.00	Depth to saturated zone	0.00	Too sandy	0.00
	Low content of organic matter	0.12			Depth to saturated zone	0.00
	Too acid	0.50			Rock fragments	0.97
	Droughty	0.97				
3448B: Grettum-----	Poor		Good		Poor	
	Wind erosion	0.00			Too sandy	0.00
	Too sandy	0.00			Too acid	0.99
	Low content of organic matter	0.12				
	Too acid	0.61				
	Droughty	0.98				
3448C: Grettum-----	Poor		Good		Poor	
	Wind erosion	0.00			Too sandy	0.00
	Too sandy	0.00			Slope	0.96
	Low content of organic matter	0.12			Too acid	0.99
	Too acid	0.61				
	Droughty	0.98				
3516A: Slimlake-----	Poor		Fair		Poor	
	Too sandy	0.00	Depth to saturated zone	0.89	Too sandy	0.00
	Low content of organic matter	0.12			Rock fragments	0.12
	Too acid	0.84			Depth to saturated zone	0.89
	Droughty	0.93				

Table 20b.--Construction Materials--Continued

Map symbol and soil name	Potential as source of reclamation material		Potential as source of roadfill		Potential as source of topsoil	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3629B: Perida-----	Poor		Fair		Poor	
	Too sandy	0.00	Shrink-swell	0.99	Too sandy	0.00
	Wind erosion	0.00			Too acid	0.99
	Low content of organic matter	0.12				
	Too acid	0.61				
M-W: Miscellaneous water	Not rated		Not rated		Not rated	
W: Water-----	Not rated		Not rated		Not rated	

Table 21.--Water Management

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. "Not rated" indicates that data are not available or that no rating is applicable. See text for further explanation of ratings in this table)

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3A: Totagatic-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Ponding Seepage	1.00 1.00 0.81	Very limited Cutbanks cave	1.00
Bowstring-----	Very limited Seepage	1.00	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Cutbanks cave	1.00
Ausable-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Ponding Seepage	1.00 1.00 0.58	Very limited Cutbanks cave	1.00
22A: Comstock-----	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping	1.00 0.96	Very limited Cutbanks cave Slow refill	1.00 0.28
24A: Poskin-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Piping Seepage	1.00 1.00 0.50	Very limited Cutbanks cave	1.00
27A: Scott Lake-----	Very limited Seepage	1.00	Somewhat limited Depth to saturated zone Seepage	0.86 0.50	Very limited Cutbanks cave Depth to water	1.00 0.06
28B: Haugen, very stony--	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Seepage	0.99 0.04	Very limited No ground water	1.00
Haugen-----	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Seepage	0.99 0.04	Very limited No ground water	1.00
Rosholt, very stony	Very limited Seepage	1.00	Somewhat limited Seepage	0.50	Very limited No ground water	1.00



Table 21.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
28B: Rosholt-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
28C: Haugen, very stony--	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Seepage	0.99 0.04	Very limited No ground water	1.00
Haugen-----	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Seepage	0.99 0.04	Very limited No ground water	1.00
Rosholt, very stony	Very limited Seepage	1.00	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
Rosholt-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
33B: Chetek-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
33C: Chetek-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
38A: Rosholt-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
38B: Rosholt-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
38C: Rosholt-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
38D: Rosholt-----	Very limited Seepage Slope	1.00 0.04	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
42D: Amery-----	Somewhat limited Seepage Slope	0.72 0.04	Somewhat limited Seepage	0.03	Very limited No ground water	1.00
43B: Antigo-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
43C: Antigo-----	Very limited Seepage Slope	1.00 0.01	Somewhat limited Seepage	0.50	Very limited No ground water	1.00

Table 21.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
43D: Antigo-----	Very limited Seepage Slope	1.00 0.21	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
48A: Brill-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.50	Very limited No ground water	1.00
63A: Crystal Lake-----	Somewhat limited Seepage	0.72	Very limited Piping Depth to saturated zone	1.00 0.99	Very limited Cutbanks cave Slow refill Depth to water	1.00 0.96 0.24
63B: Crystal Lake-----	Somewhat limited Seepage	0.72	Very limited Piping Depth to saturated zone	1.00 0.99	Very limited Cutbanks cave Slow refill Depth to water	1.00 0.96 0.24
63C: Crystal Lake-----	Somewhat limited Seepage	0.72	Very limited Piping Depth to saturated zone	1.00 0.99	Very limited Cutbanks cave Slow refill Depth to water	1.00 0.96 0.54
63E: Crystal Lake-----	Somewhat limited Seepage Slope	0.72 0.41	Very limited Piping Depth to saturated zone	1.00 0.86	Very limited Cutbanks cave Slow refill Depth to water	1.00 0.96 0.96
64A: Totagatic-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Ponding Seepage	1.00 1.00 0.81	Very limited Cutbanks cave	1.00
Winterfield-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.64	Very limited Cutbanks cave	1.00
69B: Keweenaw-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.11	Very limited No ground water	1.00
Sayner-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.72	Very limited No ground water	1.00
Vilas-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.86	Very limited No ground water	1.00
69C: Keweenaw-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.11	Very limited No ground water	1.00

Table 21.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
69C:						
Sayner-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.72	Very limited No ground water	1.00
Vilas-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.86	Very limited No ground water	1.00
69E:						
Keweenaw-----	Very limited Seepage Slope	1.00 0.50	Somewhat limited Seepage	0.11	Very limited No ground water	1.00
Sayner-----	Very limited Seepage Slope	1.00 0.50	Somewhat limited Seepage	0.72	Very limited No ground water	1.00
Vilas-----	Very limited Seepage Slope	1.00 0.50	Somewhat limited Seepage	0.86	Very limited No ground water	1.00
74B:						
Vilas-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.86	Very limited No ground water	1.00
74C:						
Vilas-----	Very limited Seepage Slope	1.00 0.01	Somewhat limited Seepage	0.86	Very limited No ground water	1.00
74D:						
Vilas-----	Very limited Seepage Slope	1.00 0.21	Somewhat limited Seepage	0.86	Very limited No ground water	1.00
100B:						
Menahga-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.64	Very limited No ground water	1.00
100C:						
Menahga-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.64	Very limited No ground water	1.00
100D:						
Menahga-----	Very limited Seepage Slope	1.00 0.15	Somewhat limited Seepage	0.64	Very limited No ground water	1.00
127D:						
Amery-----	Somewhat limited Seepage Slope	0.72 0.04	Somewhat limited Seepage	0.03	Very limited No ground water	1.00
Rosholt-----	Very limited Seepage Slope	1.00 0.04	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
127E:						
Amery-----	Somewhat limited Seepage Slope	0.72 0.64	Somewhat limited Seepage	0.03	Very limited No ground water	1.00

Table 21.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
127E: Rosholt-----	Very limited Seepage Slope	1.00 0.64	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
156B: Magnor, very stony--	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping Thin layer Seepage	1.00 1.00 0.37 0.04	Very limited No ground water	1.00
Magnor-----	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping Thin layer Seepage	1.00 1.00 0.37 0.04	Very limited No ground water	1.00
157B: Freeon, very stony--	Somewhat limited Seepage	0.02	Very limited Depth to saturated zone Piping Thin layer Seepage	1.00 1.00 0.37 0.04	Very limited No ground water	1.00
Freeon-----	Somewhat limited Seepage	0.02	Very limited Depth to saturated zone Piping Thin layer Seepage	1.00 1.00 0.37 0.04	Very limited No ground water	1.00
157C: Freeon, very stony--	Somewhat limited Seepage	0.02	Very limited Depth to saturated zone Piping Thin layer Seepage	1.00 1.00 0.37 0.04	Very limited No ground water	1.00
Freeon-----	Somewhat limited Seepage	0.02	Very limited Depth to saturated zone Piping Thin layer Seepage	1.00 1.00 0.37 0.04	Very limited No ground water	1.00
160A: Oesterle-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.50	Very limited Cutbanks cave	1.00
182B: Padus-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.50	Very limited No ground water	1.00

Table 21.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
182C: Padus-----	Very limited Seepage Slope	1.00 0.01	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
192A: Worcester-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.50	Very limited Cutbanks cave	1.00
193A: Minocqua-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Ponding Seepage	1.00 1.00 0.50	Very limited Cutbanks cave	1.00
215B: Pence-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
215C: Pence-----	Very limited Seepage Slope	1.00 0.01	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
215D: Pence-----	Very limited Seepage Slope	1.00 0.21	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
315A: Rib-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Piping Ponding Seepage	1.00 1.00 1.00 0.50	Very limited Cutbanks cave	1.00
337A: Plover-----	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping	1.00 1.00	Very limited Cutbanks cave Slow refill	1.00 0.28
368B: Mahtomedi-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.64	Very limited No ground water	1.00
Cress-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
368C: Mahtomedi-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.64	Very limited No ground water	1.00
Cress-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.50	Very limited No ground water	1.00

Table 21.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
368D:						
Mahtomedi-----	Very limited Seepage Slope	1.00 0.12	Somewhat limited Seepage	0.64	Very limited No ground water	1.00
Cress-----	Very limited Seepage Slope	1.00 0.12	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
371A:						
Croswell-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	0.99 0.86	Very limited Cutbanks cave Depth to water	1.00 0.01
380B:						
Cress-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
Rosholt-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
380C:						
Cress-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
Rosholt-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
380D:						
Cress-----	Very limited Seepage Slope	1.00 0.15	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
Rosholt-----	Very limited Seepage Slope	1.00 0.15	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
383B:						
Mahtomedi-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.64	Very limited No ground water	1.00
383C:						
Mahtomedi-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.64	Very limited No ground water	1.00
383D:						
Mahtomedi-----	Very limited Seepage Slope	1.00 0.15	Somewhat limited Seepage	0.64	Very limited No ground water	1.00
396B:						
Friendship-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.86	Very limited Cutbanks cave Depth to water	1.00 0.96
Wurtsmith-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	0.99 0.82	Very limited Cutbanks cave Depth to water	1.00 0.01

Table 21.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
396B: Grayling-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.64	Very limited No ground water	1.00
397A: Perchlake-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.64	Very limited Cutbanks cave	1.00
399B: Grayling-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.64	Very limited No ground water	1.00
399C: Grayling-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.64	Very limited No ground water	1.00
399D: Grayling-----	Very limited Seepage Slope	1.00 0.15	Somewhat limited Seepage	0.64	Very limited No ground water	1.00
405A: Lupton-----	Very limited Seepage	1.00	Not rated		Somewhat limited Cutbanks cave	0.10
Cathro-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Ponding Seepage	1.00 1.00 0.03	Somewhat limited Cutbanks cave	0.10
Tawas-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Ponding Seepage	1.00 1.00 0.20	Very limited Cutbanks cave	1.00
406A: Loxley-----	Very limited Seepage	1.00	Very limited Content of organic matter Depth to saturated zone Piping Ponding	1.00 1.00 1.00 1.00	Somewhat limited Cutbanks cave	0.10
407A: Seelyeville-----	Very limited Seepage	1.00	Very limited Content of organic matter Depth to saturated zone Piping Ponding	1.00 1.00 1.00 1.00	Somewhat limited Cutbanks cave	0.10

Table 21.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
407A: Markey-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Ponding Seepage	1.00 1.00 0.64	Very limited Cutbanks cave	1.00
410A: Seelyeville-----	Very limited Seepage	1.00	Very limited Content of organic matter Depth to saturated zone Piping Ponding	1.00 1.00 1.00 1.00	Somewhat limited Cutbanks cave	0.10
Cathro-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Ponding Seepage	1.00 1.00 0.03	Somewhat limited Cutbanks cave	0.10
412A: Rifle-----	Very limited Seepage	1.00	Not rated		Somewhat limited Cutbanks cave	0.10
Tacoosh-----	Very limited Seepage	1.00	Very limited Content of organic matter Depth to saturated zone Ponding Seepage	1.00 1.00 1.00 0.03	Somewhat limited Cutbanks cave	0.10
415A: Greenwood-----	Very limited Seepage	1.00	Not rated		Somewhat limited Cutbanks cave	0.10
439B: Graycalm-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.64	Very limited No ground water	1.00
Menahga-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.64	Very limited No ground water	1.00
439C: Graycalm-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.64	Very limited No ground water	1.00
Menahga-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.64	Very limited No ground water	1.00
439D: Graycalm-----	Very limited Seepage Slope	1.00 0.15	Somewhat limited Seepage	0.64	Very limited No ground water	1.00
Menahga-----	Very limited Seepage Slope	1.00 0.15	Somewhat limited Seepage	0.64	Very limited No ground water	1.00



Table 21.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
441C: Freeon-----	Somewhat limited Seepage Slope	0.02 0.01	Very limited Depth to saturated zone Piping Thin layer Seepage	1.00  1.00 0.37 0.04	Very limited No ground water	1.00
Cathro-----	Very limited Seepage	1.00	Not rated		Somewhat limited Cutbanks cave	0.10
442C: Haugen-----	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Seepage	0.99  0.04	Very limited No ground water	1.00
Greenwood-----	Very limited Seepage	1.00	Very limited Content of organic matter Depth to saturated zone Piping Ponding	1.00 1.00 1.00 1.00	Somewhat limited Cutbanks cave	0.10
443D: Amery-----	Somewhat limited Seepage Slope	0.72 0.28	Somewhat limited Seepage	0.03	Very limited No ground water	1.00
Greenwood-----	Very limited Seepage	1.00	Very limited Content of organic matter Depth to saturated zone Piping Ponding	1.00 1.00 1.00 1.00	Somewhat limited Cutbanks cave	0.10
461A: Bowstring-----	Very limited Seepage	1.00	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Cutbanks cave	1.00
484A: Greenwood-----	Very limited Seepage	1.00	Very limited Content of organic matter Depth to saturated zone Piping Ponding	1.00 1.00 1.00 1.00	Somewhat limited Cutbanks cave	0.10
Beseman-----	Very limited Seepage	1.00	Very limited Content of organic matter Depth to saturated zone Ponding	1.00 1.00 1.00	Somewhat limited Cutbanks cave	0.10

Table 21.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
495B:						
Karlsborg-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.72	Very limited No ground water	1.00
Grettum-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.58	Very limited Cutbanks cave Depth to water	1.00 0.96
Perida-----	Very limited Seepage	1.00	Somewhat limited Seepage Depth to saturated zone	0.72 0.09	Very limited No ground water	1.00
495C:						
Karlsborg-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.72	Very limited No ground water	1.00
Grettum-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.58	Very limited Cutbanks cave Depth to water	1.00 0.96
Perida-----	Very limited Seepage	1.00	Somewhat limited Seepage Depth to saturated zone	0.72 0.09	Very limited No ground water	1.00
495D:						
Karlsborg-----	Very limited Seepage Slope	1.00 0.15	Very limited Depth to saturated zone Seepage	1.00 0.72	Very limited No ground water	1.00
Grettum-----	Very limited Seepage Slope	1.00 0.15	Somewhat limited Seepage	0.58	Very limited Cutbanks cave Depth to water	1.00 0.96
Perida-----	Very limited Seepage Slope	1.00 0.15	Somewhat limited Seepage Depth to saturated zone	0.72 0.09	Very limited No ground water	1.00
497A:						
Meenon-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.72	Very limited No ground water	1.00
515A:						
Manitowish-----	Very limited Seepage	1.00	Somewhat limited Depth to saturated zone Seepage	0.86 0.50	Very limited Cutbanks cave Depth to water	1.00 0.06

Table 21.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
521A: Dody-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Ponding Seepage	1.00 1.00 0.13	Very limited No ground water	1.00
524E: Rock outcrop-----	Somewhat limited Slope	0.21	Not rated		Not rated	
Frogcreek-----	Somewhat limited Seepage	0.04	Very limited Depth to saturated zone Thin layer Seepage	1.00 0.11 0.09	Very limited No ground water	1.00
Metonga-----	Very limited Seepage Depth to bedrock Slope	1.00 0.85 0.64	Very limited Piping Thin layer Seepage	1.00 0.85 0.04	Very limited No ground water	1.00
542B: Haugen, very stony--	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Seepage	0.99 0.04	Very limited No ground water	1.00
Haugen-----	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Seepage	0.99 0.04	Very limited No ground water	1.00
542C: Haugen, very stony--	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Seepage	0.99 0.04	Very limited No ground water	1.00
Haugen-----	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Seepage	0.99 0.04	Very limited No ground water	1.00
543B: Anigon-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
543C2: Anigon-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
544F: Menahga-----	Very limited Seepage Slope	1.00 0.82	Somewhat limited Seepage	0.64	Very limited No ground water	1.00
Mahtomedi-----	Very limited Seepage Slope	1.00 0.82	Somewhat limited Seepage	0.64	Very limited No ground water	1.00

Table 21.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
555A: Fordum-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Ponding Seepage	1.00 1.00 0.53	Very limited Cutbanks cave	1.00
574B: Sayner-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.72	Very limited No ground water	1.00
574C: Sayner-----	Very limited Seepage Slope	1.00 0.01	Somewhat limited Seepage	0.72	Very limited No ground water	1.00
574E: Sayner-----	Very limited Seepage Slope	1.00 0.50	Somewhat limited Seepage	0.72	Very limited No ground water	1.00
579B: Parkfalls-----	Somewhat limited Seepage	0.04	Very limited Depth to saturated zone Thin layer Seepage	1.00 0.77 0.07	Very limited No ground water	1.00
600A: Haplosaprists-----	Not limited		Not rated		Not rated	
Psammaquents-----	Not limited		Not rated		Not rated	
615B: Cress-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
615C: Cress-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
615D: Cress-----	Very limited Seepage Slope	1.00 0.15	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
623A: Capitola-----	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping Ponding Thin layer Seepage	1.00 1.00 1.00 0.86 0.04	Very limited No ground water	1.00
624A: Ossmer-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.50	Very limited Cutbanks cave	1.00

Table 21.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
632A: Aftad-----	Somewhat limited Seepage	0.72	Very limited Piping Depth to saturated zone	1.00 0.99	Very limited Cutbanks cave Slow refill Depth to water	1.00 0.28 0.24
632B: Aftad-----	Somewhat limited Seepage	0.72	Very limited Piping Depth to saturated zone	1.00 0.99	Very limited Cutbanks cave Slow refill Depth to water	1.00 0.28 0.24
632C: Aftad-----	Somewhat limited Seepage	0.72	Very limited Piping Depth to saturated zone	1.00 0.99	Very limited Cutbanks cave Slow refill Depth to water	1.00 0.96 0.54
633F: Pence-----	Very limited Seepage Slope	1.00 0.82	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
Padus-----	Very limited Seepage Slope	1.00 0.82	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
648B: Sconsin-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Piping Thin layer Seepage	1.00 1.00 0.88 0.01	Very limited No ground water	1.00
670C: Keweenaw-----	Very limited Seepage Slope	1.00 0.01	Somewhat limited Seepage	0.11	Very limited No ground water	1.00
Pence-----	Very limited Seepage Slope	1.00 0.01	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
670E: Keweenaw-----	Very limited Seepage Slope	1.00 0.50	Somewhat limited Seepage	0.11	Very limited No ground water	1.00
Pence-----	Very limited Seepage Slope	1.00 0.50	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
671B: Spoonershill, stony--	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Seepage	0.99 0.11	Very limited No ground water	1.00

Table 21.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
671B: Spoonershill-----	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Seepage	0.99 0.11	Very limited No ground water	1.00
680B: Stanberry, stony----	Somewhat limited Seepage	0.04	Very limited Depth to saturated zone Thin layer Seepage	0.99 0.37 0.07	Very limited No ground water	1.00
Pence, stony-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
683A: Tipler-----	Very limited Seepage	1.00	Somewhat limited Depth to saturated zone Seepage	0.86 0.50	Very limited Cutbanks cave Depth to water	1.00 0.06
706A: Winterfield-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.64	Very limited Cutbanks cave	1.00
Totagatic-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Ponding Seepage	1.00 1.00 0.81	Very limited Cutbanks cave	1.00
724A: Rib-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Piping Ponding Seepage	1.00 1.00 0.50	Very limited Cutbanks cave	1.00
Rock outcrop-----	Not rated		Not rated		Not rated	
726B: Sissabagama-----	Very limited Seepage	1.00	Somewhat limited Depth to saturated zone Seepage	0.86 0.36	Very limited Cutbanks cave Depth to water	1.00 0.24
733A: Wozny-----	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping Ponding Thin layer Seepage	1.00 1.00 0.11 0.09	Very limited No ground water	1.00

Table 21.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
771A: Lenroot-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	0.99 0.54	Very limited Cutbanks cave Depth to water	1.00 0.01
827A: Scoba-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	0.99 0.50	Very limited Cutbanks cave Depth to water	1.00 0.01
853C: Frogcreek-----	Somewhat limited Seepage	0.04	Very limited Depth to saturated zone Thin layer Seepage	1.00 0.11 0.09	Very limited No ground water	1.00
Stinnett-----	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping Thin layer Seepage	1.00 1.00 0.11 0.09	Very limited No ground water	1.00
Wozny-----	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping Ponding Thin layer Seepage	1.00 1.00 1.00 0.11 0.09	Very limited No ground water	1.00
856B: Stinnett-----	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping Thin layer Seepage	1.00 1.00 0.11 0.09	Very limited No ground water	1.00
857B: Frogcreek-----	Somewhat limited Seepage	0.04	Very limited Depth to saturated zone Thin layer Seepage	1.00 0.11 0.09	Very limited No ground water	1.00
857C: Frogcreek-----	Somewhat limited Seepage	0.04	Very limited Depth to saturated zone Thin layer Seepage	1.00 0.11 0.09	Very limited No ground water	1.00

Table 21.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
873B: Stanberry-----	Somewhat limited Seepage	0.04	Very limited Depth to saturated zone Thin layer Seepage	0.99 0.37 0.07	Very limited No ground water	1.00
873C: Stanberry-----	Somewhat limited Seepage Slope	0.04 0.01	Very limited Depth to saturated zone Thin layer Seepage	0.99 0.37 0.07	Very limited No ground water	1.00
873D: Stanberry-----	Somewhat limited Slope Seepage	0.21 0.04	Very limited Depth to saturated zone Thin layer Seepage	0.99 0.37 0.07	Very limited No ground water	1.00
905A: Cublake-----	Very limited Seepage	1.00	Somewhat limited Depth to saturated zone Seepage	0.86 0.08	Very limited Cutbanks cave Depth to water	1.00 0.24
926A: Flink-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.75	Very limited No ground water	1.00
943D: Stanberry-----	Somewhat limited Slope Seepage	0.08 0.04	Very limited Depth to saturated zone Thin layer Seepage	0.99 0.37 0.07	Very limited No ground water	1.00
Greenwood-----	Somewhat limited Seepage	0.72	Not rated		Somewhat limited Cutbanks cave	0.10
948A: Billyboy-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.50	Very limited Cutbanks cave	1.00
970C: Keweenaw-----	Very limited Seepage Slope	1.00 0.01	Somewhat limited Seepage	0.11	Very limited No ground water	1.00
Pence-----	Very limited Seepage Slope	1.00 0.01	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
Greenwood-----	Very limited Seepage	1.00	Not rated		Somewhat limited Cutbanks cave	0.10



Table 21.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
970E:						
Keweenaw-----	Very limited Seepage Slope	1.00 0.50	Somewhat limited Seepage	0.11	Very limited No ground water	1.00
Pence-----	Very limited Seepage Slope	1.00 0.50	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
Greenwood-----	Very limited Seepage	1.00	Not rated		Somewhat limited Cutbanks cave	0.10
1070C:						
Fremstadt-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.07	Very limited No ground water	1.00
Cress-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
1070D:						
Fremstadt-----	Very limited Seepage Slope	1.00 0.21	Somewhat limited Seepage	0.07	Very limited No ground water	1.00
Cress-----	Very limited Seepage Slope	1.00 0.15	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
1080B:						
Spoonerhill-----	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Seepage	0.99 0.10	Very limited No ground water	1.00
Spoonerhill, stony--	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Seepage	0.99 0.11	Very limited No ground water	1.00
Cress-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.50	Very limited No ground water	1.00
1653C:						
Stanberry-----	Somewhat limited Seepage	0.04	Very limited Depth to saturated zone Thin layer Seepage	0.99 0.37 0.07	Very limited No ground water	1.00
Parkfalls-----	Somewhat limited Seepage	0.04	Very limited Depth to saturated zone Thin layer Seepage	1.00 0.77 0.07	Very limited No ground water	1.00

Table 21.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1653C: Wozny-----	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping Ponding Thin layer Seepage	1.00 1.00 1.00 0.11 0.09	Very limited No ground water	1.00
2015: Pits-----	Not rated		Not rated		Not rated	
2050: Landfill-----	Not rated		Not rated		Not rated	
3011A: Barronett-----	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping Ponding	1.00 1.00 1.00	Very limited Cutbanks cave Slow refill	1.00 0.28
3125A: Meehan-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.82	Very limited Cutbanks cave	1.00
3126A: Wurtsmith-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	0.99 0.82	Very limited Cutbanks cave Depth to water	1.00 0.01
3276A: Au Gres-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Seepage	1.00 0.86	Very limited Cutbanks cave	1.00
3312B: Glendenning, very stony-----	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Seepage	1.00 0.04	Very limited No ground water	1.00
Glendenning-----	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Seepage	1.00 0.04	Very limited No ground water	1.00
3336A: Fenander-----	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Ponding	1.00 1.00	Very limited Cutbanks cave Slow refill	1.00 0.28

Table 21.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3403A: Loxley-----	Very limited Seepage	1.00	Very limited Content of organic matter Depth to saturated zone Piping Ponding	1.00 1.00 1.00 1.00	Somewhat limited Cutbanks cave	0.10
Beseman-----	Very limited Seepage	1.00	Very limited Content of organic matter Depth to saturated zone Piping Ponding	1.00 1.00 1.00 1.00	Somewhat limited Cutbanks cave	0.10
Dawson-----	Very limited Seepage	1.00	Very limited Content of organic matter Depth to saturated zone Ponding Seepage	1.00 1.00 1.00 0.64	Very limited Cutbanks cave	1.00
3424C: Frogcreek-----	Somewhat limited Seepage	0.04	Very limited Depth to saturated zone Thin layer Seepage	1.00 0.11 0.09	Very limited No ground water	1.00
Magroc-----	Very limited Seepage Depth to bedrock	1.00 0.10	Very limited Depth to saturated zone Thin layer Seepage	1.00 0.11 0.10	Very limited No ground water	1.00
Stinnett-----	Somewhat limited Seepage	0.72	Very limited Depth to saturated zone Piping Thin layer Seepage	1.00 1.00 0.11 0.09	Very limited No ground water	1.00
Rock outcrop-----	Not limited		Not rated		Not rated	
3446A: Newson-----	Very limited Seepage	1.00	Very limited Depth to saturated zone Ponding Seepage	1.00 1.00 0.82	Very limited Cutbanks cave	1.00
3448B: Grettum-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.58	Very limited Cutbanks cave Depth to water	1.00 0.96

Table 21.--Water Management--Continued

Map symbol and soil name	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3448C: Grettum-----	Very limited Seepage	1.00	Somewhat limited Seepage	0.58	Very limited Cutbanks cave Depth to water	1.00 0.96
3516A: Slimlake-----	Very limited Seepage	1.00	Somewhat limited Depth to saturated zone Seepage	0.86 0.79	Very limited Cutbanks cave Depth to water	1.00 0.06
3629B: Perida-----	Very limited Seepage	1.00	Somewhat limited Seepage Depth to saturated zone	0.72 0.09	Very limited No ground water	1.00
M-W: Miscellaneous water	Not rated		Not rated		Not rated	
W: Water-----	Not rated		Not rated		Not rated	

Table 22a.--Agricultural Waste Management

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. "Not rated" indicates that data are not available or that no rating is applicable. See text for further explanation of ratings in this table)

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
3A:				
Totagatic-----	Very limited		Very limited	
	Flooding	1.00	Filtering	1.00
	Depth to	1.00	capacity	
	saturated zone		Depth to	1.00
	Ponding	1.00	saturated zone	
			Flooding	1.00
			Ponding	1.00
			Too acid	0.77
Bowstring-----	Very limited		Very limited	
	Flooding	1.00	Filtering	1.00
	Depth to	1.00	capacity	
	saturated zone		Depth to	1.00
	Ponding	1.00	saturated zone	
	Restricted	0.69	Low adsorption	1.00
	permeability		Flooding	1.00
			Ponding	1.00
Ausable-----	Very limited		Very limited	
	Flooding	1.00	Filtering	1.00
	Depth to	1.00	capacity	
	saturated zone		Depth to	1.00
	Ponding	1.00	saturated zone	
	Restricted	0.69	Flooding	1.00
	permeability		Ponding	1.00
			Too acid	0.07
22A:				
Comstock-----	Very limited		Very limited	
	Restricted	1.00	Depth to	1.00
	permeability		saturated zone	
	Depth to	1.00	Too acid	0.31
	saturated zone		Restricted	0.21
			permeability	
24A:				
Poskin-----	Very limited		Very limited	
	Depth to	1.00	Filtering	1.00
	saturated zone		capacity	
	Restricted	1.00	Depth to	1.00
	permeability		saturated zone	
			Too acid	0.31
27A:				
Scott Lake-----	Very limited		Very limited	
	Depth to	1.00	Filtering	1.00
	saturated zone		capacity	
	Restricted	1.00	Depth to	0.86
	permeability		saturated zone	
			Too acid	0.31

Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
28B: Haugen, very stony--	Very limited Restricted permeability Depth to saturated zone	1.00  0.99	Very limited Depth to saturated zone Too acid Restricted permeability Too steep for surface application	0.99  0.91 0.60 0.08
Haugen-----	Very limited Restricted permeability Depth to saturated zone	1.00  0.99	Very limited Depth to saturated zone Too acid Restricted permeability Too steep for surface application	0.99  0.91 0.60 0.08
Rosholt, very stony	Very limited Restricted permeability	1.00	Very limited Filtering capacity Too acid Too steep for surface application	1.00  0.31 0.08
Rosholt-----	Very limited Restricted permeability	1.00	Very limited Filtering capacity Too acid Too steep for surface application	1.00  0.31 0.08
28C: Haugen, very stony--	Very limited Restricted permeability Slope Depth to saturated zone	1.00  1.00 0.99	Very limited Too steep for surface application Depth to saturated zone Too acid Restricted permeability Too steep for sprinkler application	1.00   0.99 0.91 0.60 0.50

Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
28C: Haugen-----	Very limited		Very limited	
	Restricted permeability	1.00	Too steep for surface application	1.00
	Slope	1.00	Depth to saturated zone	0.99
	Depth to saturated zone	0.99	Too acid	0.91
			Restricted permeability	0.60
			Too steep for sprinkler application	0.50
Rosholt, very stony	Very limited		Very limited	
	Slope	1.00	Filtering capacity	1.00
	Restricted permeability	1.00	Too steep for surface application	1.00
			Too steep for sprinkler application	0.50
			Too acid	0.31
Rosholt-----	Very limited		Very limited	
	Slope	1.00	Filtering capacity	1.00
	Restricted permeability	1.00	Too steep for surface application	1.00
			Too steep for sprinkler application	0.50
			Too acid	0.31
33B: Chetek-----	Very limited		Very limited	
	Restricted permeability	1.00	Filtering capacity	1.00
			Too steep for surface application	0.08
			Too acid	0.07
33C: Chetek-----	Very limited		Very limited	
	Restricted permeability	1.00	Filtering capacity	1.00
	Slope	1.00	Too steep for surface application	1.00
			Too steep for sprinkler application	0.50
			Too acid	0.07

Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
38A: Rosholt-----	Very limited Restricted permeability	1.00	Very limited Filtering capacity Too acid	1.00 0.31
38B: Rosholt-----	Very limited Restricted permeability	1.00	Very limited Filtering capacity Too acid Too steep for surface application	1.00 0.31 0.08
38C: Rosholt-----	Very limited Slope Restricted permeability	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 0.50 0.31
38D: Rosholt-----	Very limited Slope Restricted permeability	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 0.31
42D: Amery-----	Very limited Slope Restricted permeability	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application Too acid Restricted permeability	1.00 1.00 0.77 0.21
43B: Antigo-----	Very limited Restricted permeability	1.00	Very limited Filtering capacity Too acid Too steep for surface application	1.00 0.31 0.08



Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
43C: Antigo-----	Very limited		Very limited	
	Restricted	1.00	Filtering	1.00
	permeability		capacity	
	Slope	1.00	Too steep for	1.00
			surface	
			application	
			Too steep for	0.94
			sprinkler	
			application	
			Too acid	0.31
43D: Antigo-----	Very limited		Very limited	
	Slope	1.00	Filtering	1.00
	Restricted	1.00	capacity	
	permeability		Too steep for	1.00
			surface	
			application	
			Too steep for	1.00
			sprinkler	
			application	
			Too acid	0.31
48A: Brill-----	Very limited		Very limited	
	Depth to	1.00	Filtering	1.00
	saturated zone		capacity	
	Restricted	1.00	Depth to	1.00
	permeability		saturated zone	
			Too acid	0.31
63A: Crystal Lake-----	Very limited		Very limited	
	Restricted	1.00	Depth to	0.99
	permeability		saturated zone	
	Depth to	1.00	Too acid	0.31
	saturated zone		Restricted	0.21
			permeability	
63B: Crystal Lake-----	Very limited		Very limited	
	Restricted	1.00	Depth to	0.99
	permeability		saturated zone	
	Depth to	1.00	Too acid	0.31
	saturated zone		Restricted	0.21
			permeability	
			Too steep for	0.08
			surface	
			application	

Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
63C: Crystal Lake-----	Very limited		Very limited	
	Restricted permeability	1.00	Too steep for surface application	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	0.99
	Slope	1.00	Too steep for sprinkler application	0.50
			Too acid	0.31
			Restricted permeability	0.21
63E: Crystal Lake-----	Very limited		Very limited	
	Slope	1.00	Too steep for surface application	1.00
	Restricted permeability	1.00	Too steep for sprinkler application	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	0.86
			Too acid	0.31
			Restricted permeability	0.21
64A: Totagatic-----	Very limited		Very limited	
	Flooding	1.00	Filtering capacity	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Flooding	1.00
			Ponding	1.00
			Too acid	0.77
Winterfield-----	Very limited		Very limited	
	Flooding	1.00	Filtering capacity	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Flooding	1.00
69B: Keweenaw-----	Somewhat limited		Somewhat limited	
	Restricted permeability	0.61	Too acid	0.77
			Too steep for surface application	0.08
			Filtering capacity	0.01
Sayner-----	Somewhat limited		Very limited	
	Restricted permeability	0.31	Filtering capacity	1.00
			Too acid	0.77
			Too steep for surface application	0.08

Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
69B: Vilas-----	Not limited		Very limited Filtering capacity Too acid Too steep for surface application	1.00 0.31 0.08
69C: Keweenaw-----	Very limited Slope Restricted permeability	1.00 0.61	Very limited Too steep for surface application Too steep for sprinkler application Too acid Filtering capacity	1.00 0.78 0.77 0.01
Sayner-----	Very limited Slope Restricted permeability	1.00 0.31	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 0.78 0.77
Vilas-----	Very limited Slope	1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 0.78 0.31
69E: Keweenaw-----	Very limited Slope Restricted permeability	1.00 0.61	Very limited Too steep for surface application Too steep for sprinkler application Too acid Filtering capacity	1.00 1.00 0.77 0.01

Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
69E: Sayner-----	Very limited Slope Restricted permeability	1.00 0.31	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 0.77
Vilas-----	Very limited Slope	1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 0.31
74B: Vilas-----	Not limited		Very limited Filtering capacity Too acid	1.00 0.31
74C: Vilas-----	Very limited Slope	1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 0.94 0.31
74D: Vilas-----	Very limited Slope	1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 0.31
100B: Menahga-----	Not limited		Very limited Filtering capacity Too acid	1.00 0.99

Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
100C: Menahga-----	Very limited Slope	1.00	Very limited Filtering capacity Too steep for surface application Too acid Too steep for sprinkler application	1.00 1.00 0.99 0.50
100D: Menahga-----	Very limited Slope	1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 0.99
127D: Amery-----	Very limited Slope Restricted permeability	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application Too acid Restricted permeability	1.00 1.00 0.77 0.21
Rosholt-----	Very limited Slope Restricted permeability	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 0.31
127E: Amery-----	Very limited Slope Restricted permeability	1.00 1.00	Very limited Too steep for surface application Too steep for sprinkler application Too acid Restricted permeability	1.00 1.00 0.77 0.21

Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
127E: Rosholt-----	Very limited Slope Restricted permeability	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00 0.31
156B: Magnor, very stony--	Very limited Restricted permeability Depth to saturated zone Too acid	1.00 1.00 0.03	Very limited Depth to saturated zone Too acid Restricted permeability	1.00 0.85 0.43
Magnor-----	Very limited Restricted permeability Depth to saturated zone Too acid	1.00 1.00 0.03	Very limited Depth to saturated zone Too acid Restricted permeability	1.00 0.85 0.43
157B: Freeon, very stony--	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Too acid Restricted permeability Too steep for surface application	1.00 0.77 0.43 0.08
Freeon-----	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Too acid Restricted permeability Too steep for surface application	1.00 0.85 0.43 0.08
157C: Freeon, very stony--	Very limited Restricted permeability Depth to saturated zone Slope	1.00 1.00 1.00	Very limited Depth to saturated zone Too steep for surface application Too acid Too steep for sprinkler application Restricted permeability	1.00 1.00 0.77 0.50 0.43

Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
157C: Freeon-----	Very limited		Very limited	
	Restricted permeability	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Too steep for surface application	1.00
	Slope	1.00	Too acid	0.85
			Too steep for sprinkler application	0.50
			Restricted permeability	0.43
160A: Oesterle-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Filtering capacity	1.00
	Restricted permeability	0.61	Depth to saturated zone	1.00
			Too acid	0.77
182B: Padus-----	Very limited		Very limited	
	Restricted permeability	1.00	Filtering capacity	1.00
			Too acid	0.31
182C: Padus-----	Very limited		Very limited	
	Restricted permeability	1.00	Filtering capacity	1.00
	Slope	1.00	Too steep for surface application	1.00
			Too steep for sprinkler application	0.94
			Too acid	0.31
192A: Worcester-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Filtering capacity	1.00
	Restricted permeability	1.00	Depth to saturated zone	1.00
			Too acid	0.31
193A: Minocqua-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Filtering capacity	1.00
	Restricted permeability	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00
			Too acid	0.07

Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
215B: Pence-----	Somewhat limited Restricted permeability	0.61	Very limited Filtering capacity Too acid	1.00 0.31
215C: Pence-----	Very limited Slope Restricted permeability	1.00 0.61	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 0.94 0.31
215D: Pence-----	Very limited Slope Restricted permeability	1.00 0.61	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00 0.31
315A: Rib-----	Very limited Depth to saturated zone Restricted permeability Ponding	1.00 1.00 1.00	Very limited Filtering capacity Depth to saturated zone Ponding Too acid	1.00 1.00 1.00 1.00 0.31
337A: Plover-----	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Restricted permeability Too acid	1.00 0.60 0.31
368B: Mahtomedi-----	Not limited		Very limited Filtering capacity Too acid Too steep for surface application	1.00 0.42 0.08



Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
368B: Cress-----	Very limited Restricted permeability	1.00	Very limited Filtering capacity Too acid Too steep for surface application	1.00 0.31 0.08
368C: Mahtomedi-----	Very limited Slope	1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 0.50 0.42
Cress-----	Very limited Restricted permeability Slope	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 0.50 0.31
368D: Mahtomedi-----	Very limited Slope	1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 0.42
Cress-----	Very limited Slope Restricted permeability	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 0.31

Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
371A: Croswell-----	Very limited Depth to saturated zone	1.00	Very limited Filtering capacity Depth to saturated zone Too acid	1.00 0.99 0.31
380B: Cress-----	Very limited Restricted permeability	1.00	Very limited Filtering capacity Too acid Too steep for surface application	1.00 0.31 0.08
Rosholt-----	Very limited Restricted permeability	1.00	Very limited Filtering capacity Too acid Too steep for surface application	1.00 0.31 0.08
380C: Cress-----	Very limited Restricted permeability Slope	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 0.50 0.31
Rosholt-----	Very limited Slope Restricted permeability	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 0.50 0.31
380D: Cress-----	Very limited Slope Restricted permeability	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 0.31

Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
380D: Rosholt-----	Very limited Slope Restricted permeability	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00 0.31
383B: Mahtomedi-----	Not limited		Very limited Filtering capacity Too acid	1.00 0.42
383C: Mahtomedi-----	Very limited Slope	1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 0.50 0.42
383D: Mahtomedi-----	Very limited Slope	1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 0.42
396B: Friendship-----	Very limited Depth to saturated zone	1.00	Very limited Filtering capacity Too acid	1.00 0.21
Wurtsmith-----	Very limited Depth to saturated zone Too acid	1.00 0.03	Very limited Filtering capacity Too acid Depth to saturated zone	1.00 1.00 0.99
Grayling-----	Somewhat limited Too acid	0.21	Very limited Filtering capacity Too acid	1.00 1.00

Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
397A: Perchlake-----	Very limited Depth to saturated zone	1.00	Very limited Filtering capacity Depth to saturated zone Too acid	1.00 1.00 0.77
399B: Grayling-----	Somewhat limited Too acid	0.21	Very limited Filtering capacity Too acid	1.00 1.00
399C: Grayling-----	Very limited Slope Too acid	1.00 0.21	Very limited Filtering capacity Too acid Too steep for surface application Too steep for sprinkler application	1.00 1.00 1.00 0.50
399D: Grayling-----	Very limited Slope Too acid	1.00 0.21	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00
405A: Lupton-----	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 0.69	Very limited Depth to saturated zone Ponding	1.00 1.00
Cathro-----	Very limited Depth to saturated zone Restricted permeability Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding Too acid	1.00 1.00 0.07
Tawas-----	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 0.69	Very limited Filtering capacity Depth to saturated zone Ponding	1.00 1.00 1.00

Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
406A: Loxley-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Filtering capacity	1.00
	Ponding	1.00	Depth to saturated zone	1.00
	Too acid	0.77	Too acid	1.00
	Restricted permeability	0.69	Ponding	1.00
407A: Seelyeville-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00
	Restricted permeability	0.68	Too acid	0.31
Markey-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Filtering capacity	1.00
	Restricted permeability	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00
410A: Seelyeville-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00
	Restricted permeability	0.68	Too acid	0.31
Cathro-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	1.00	Ponding	1.00
	Ponding	1.00	Too acid	0.07
412A: Rifle-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00
	Restricted permeability	0.31	Filtering capacity	0.01
Tacoosh-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	1.00	Ponding	1.00
	Ponding	1.00		
415A: Greenwood-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Too acid	1.00
	Restricted permeability	0.69	Ponding	1.00

Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
439B:				
Graycalm-----	Not limited		Very limited Filtering capacity	1.00
			Too acid	0.99
Menahga-----	Not limited		Very limited Filtering capacity	1.00
			Too acid	0.99
439C:				
Graycalm-----	Very limited Slope	1.00	Very limited Filtering capacity	1.00
			Too steep for surface application	1.00
			Too acid	0.99
			Too steep for sprinkler application	0.50
Menahga-----	Very limited Slope	1.00	Very limited Filtering capacity	1.00
			Too steep for surface application	1.00
			Too acid	0.99
			Too steep for sprinkler application	0.50
439D:				
Graycalm-----	Very limited Slope	1.00	Very limited Filtering capacity	1.00
			Too steep for surface application	1.00
			Too steep for sprinkler application	1.00
			Too acid	0.99
Menahga-----	Very limited Slope	1.00	Very limited Filtering capacity	1.00
			Too steep for surface application	1.00
			Too steep for sprinkler application	1.00
			Too acid	0.99

Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
441C: Freeon-----	Very limited		Very limited	
	Restricted permeability	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Too steep for surface application	1.00
	Slope	1.00	Too steep for sprinkler application	0.94
			Too acid	0.85
			Restricted permeability	0.43
Cathro-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	1.00	Ponding	1.00
	Ponding	1.00	Too acid	0.07
442C: Haugen-----	Very limited		Very limited	
	Restricted permeability	1.00	Depth to saturated zone	0.99
	Depth to saturated zone	0.99	Too steep for surface application	0.92
	Slope	0.88	Too acid	0.91
			Restricted permeability	0.60
			Too steep for sprinkler application	0.06
Greenwood-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Filtering capacity	1.00
	Ponding	1.00	Depth to saturated zone	1.00
	Too acid	0.77	Too acid	1.00
	Restricted permeability	0.61	Ponding	1.00
443D: Amery-----	Very limited		Very limited	
	Slope	1.00	Too steep for surface application	1.00
	Restricted permeability	1.00	Too steep for sprinkler application	1.00
			Too acid	0.31
			Restricted permeability	0.21

Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
443D: Greenwood-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Filtering capacity	1.00
	Ponding	1.00	Depth to saturated zone	1.00
	Too acid	0.77	Too acid	1.00
	Restricted permeability	0.61	Ponding	1.00
461A: Bowstring-----	Very limited		Very limited	
	Flooding	1.00	Filtering capacity	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Low adsorption	1.00
	Restricted permeability	0.69	Flooding	1.00
			Ponding	1.00
484A: Greenwood-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Filtering capacity	1.00
	Ponding	1.00	Depth to saturated zone	1.00
	Too acid	0.77	Too acid	1.00
	Restricted permeability	0.61	Ponding	1.00
Beseman-----	Very limited		Very limited	
	Restricted permeability	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Too acid	1.00
	Ponding	1.00	Ponding	1.00
			Restricted permeability	0.21
495B: Karlsborg-----	Very limited		Very limited	
	Restricted permeability	1.00	Filtering capacity	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Restricted permeability	0.98
			Too acid	0.77
			Too steep for surface application	0.08
Grettum-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Filtering capacity	1.00
			Too acid	0.85
			Too steep for surface application	0.08



Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
495B: Perida-----	Very limited		Very limited	
	Restricted permeability	1.00	Filtering capacity	1.00
	Depth to saturated zone	0.09	Restricted permeability	1.00
			Too acid	0.85
			Depth to saturated zone	0.09
			Too steep for surface application	0.08
495C: Karlsborg-----	Very limited		Very limited	
	Restricted permeability	1.00	Filtering capacity	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Slope	1.00	Too steep for surface application	1.00
			Restricted permeability	0.98
			Too acid	0.77
Grettum-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Filtering capacity	1.00
	Slope	1.00	Too steep for surface application	1.00
			Too acid	0.85
			Too steep for sprinkler application	0.50
Perida-----	Very limited		Very limited	
	Restricted permeability	1.00	Filtering capacity	1.00
	Slope	1.00	Restricted permeability	1.00
	Depth to saturated zone	0.09	Too steep for surface application	1.00
			Too acid	0.85
			Too steep for sprinkler application	0.50

Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
495D: Karlsborg-----	Very limited Slope Restricted permeability Depth to saturated zone	1.00 1.00 1.00	Very limited Filtering capacity Depth to saturated zone Too steep for surface application Too steep for sprinkler application Restricted permeability	1.00 1.00 1.00 1.00 1.00 0.98
Grettum-----	Very limited Slope Depth to saturated zone	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00 0.85
Perida-----	Very limited Slope Restricted permeability Depth to saturated zone	1.00 1.00 0.09	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Restricted permeability Too acid	1.00 1.00 1.00 1.00 1.00 0.85
497A: Meenon-----	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Filtering capacity Depth to saturated zone Restricted permeability Too acid	1.00 1.00 1.00 0.31
515A: Manitowish-----	Very limited Depth to saturated zone Restricted permeability	1.00 0.61	Very limited Filtering capacity Depth to saturated zone Too acid	1.00 0.86 0.31

Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
521A: Dody-----	Very limited		Very limited	
	Restricted permeability	1.00	Filtering capacity	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00
			Restricted permeability	0.98
			Too acid	0.31
524E: Rock outcrop-----	Not rated		Not rated	
Frogcreek-----	Very limited		Very limited	
	Restricted permeability	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Too steep for surface application	1.00
	Slope	1.00	Too acid	0.31
			Too steep for sprinkler application	0.22
			Restricted permeability	0.21
Metonga-----	Very limited		Very limited	
	Slope	1.00	Depth to bedrock	1.00
	Depth to bedrock	1.00	Too steep for surface application	1.00
	Restricted permeability	1.00	Too steep for sprinkler application	1.00
	Too acid	0.03	Too acid	0.31
542B: Haugen, very stony--	Very limited		Very limited	
	Restricted permeability	1.00	Depth to saturated zone	0.99
	Depth to saturated zone	0.99	Too acid	0.91
			Restricted permeability	0.60
			Too steep for surface application	0.08
Haugen-----	Very limited		Very limited	
	Restricted permeability	1.00	Depth to saturated zone	0.99
	Depth to saturated zone	0.99	Too acid	0.91
			Restricted permeability	0.60
			Too steep for surface application	0.08

Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
542C: Haugen, very stony--	Very limited		Very limited	
	Restricted permeability	1.00	Too steep for surface application	1.00
	Slope	1.00	Depth to saturated zone	0.99
	Depth to saturated zone	0.99	Too acid	0.91
			Restricted permeability	0.60
			Too steep for sprinkler application	0.50
Haugen-----	Very limited		Very limited	
	Restricted permeability	1.00	Too steep for surface application	1.00
	Slope	1.00	Depth to saturated zone	0.99
	Depth to saturated zone	0.99	Too acid	0.91
			Restricted permeability	0.60
			Too steep for sprinkler application	0.50
543B: Anigon-----	Very limited		Very limited	
	Restricted permeability	1.00	Filtering capacity	1.00
			Too acid	0.31
			Too steep for surface application	0.08
543C2: Anigon-----	Very limited		Very limited	
	Restricted permeability	1.00	Filtering capacity	1.00
	Slope	1.00	Too steep for surface application	1.00
			Too steep for sprinkler application	0.50
			Too acid	0.31
544F: Menahga-----	Very limited		Very limited	
	Slope	1.00	Filtering capacity	1.00
			Too steep for surface application	1.00
			Too steep for sprinkler application	1.00
			Too acid	0.99

Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
544F: Mahtomedi-----	Very limited Slope	1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 0.42
555A: Fordum-----	Very limited Flooding Depth to saturated zone Restricted permeability Ponding	1.00 1.00 1.00 1.00	Very limited Filtering capacity Depth to saturated zone Flooding Ponding	1.00 1.00 1.00 1.00
574B: Sayner-----	Somewhat limited Restricted permeability	0.31	Very limited Filtering capacity Too acid	1.00 0.77
574C: Sayner-----	Very limited Slope Restricted permeability	1.00 0.31	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 0.94 0.77
574E: Sayner-----	Very limited Slope Restricted permeability	1.00 0.31	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 0.77
579B: Parkfalls-----	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Too acid Restricted permeability	1.00 0.77 0.21

Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
600A: Haplosaprists-----	Not rated		Not rated	
Psammaquents-----	Not rated		Not rated	
615B: Cress-----	Very limited Restricted permeability	1.00	Very limited Filtering capacity Too acid	1.00 0.31
615C: Cress-----	Very limited Restricted permeability Slope	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 0.50 0.31
615D: Cress-----	Very limited Slope Restricted permeability	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 0.31
623A: Capitola-----	Very limited Depth to saturated zone Restricted permeability Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding Too acid Filtering capacity	1.00 1.00 0.31 0.01
624A: Ossmer-----	Very limited Depth to saturated zone Restricted permeability	1.00 1.00	Very limited Filtering capacity Depth to saturated zone Too acid	1.00 1.00 0.31
632A: Aftad-----	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Too acid Restricted permeability	0.99 0.31 0.21

Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
632B: Aftad-----	Very limited		Very limited	
	Restricted	1.00	Depth to	0.99
	permeability		saturated zone	
	Depth to	1.00	Too acid	0.31
	saturated zone		Restricted	0.21
			permeability	
			Too steep for	0.08
			surface	
			application	
632C: Aftad-----	Very limited		Very limited	
	Restricted	1.00	Too steep for	1.00
	permeability		surface	
	Depth to	1.00	application	
	saturated zone		Depth to	0.99
	Slope	1.00	saturated zone	
			Too steep for	0.50
			sprinkler	
			application	
			Too acid	0.31
			Restricted	0.21
			permeability	
633F: Pence-----	Very limited		Very limited	
	Slope	1.00	Filtering	1.00
	Restricted	0.61	capacity	
	permeability		Too steep for	1.00
			surface	
			application	
			Too steep for	1.00
			sprinkler	
			application	
			Too acid	0.31
Padus-----	Very limited		Very limited	
	Slope	1.00	Filtering	1.00
	Restricted	1.00	capacity	
	permeability		Too steep for	1.00
			surface	
			application	
			Too steep for	1.00
			sprinkler	
			application	
			Too acid	0.31
648B: Sconsin-----	Very limited		Very limited	
	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone	
	Restricted	1.00	Too acid	0.31
	permeability		Too steep for	0.08
			surface	
			application	

Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
670C:				
Keweenaw-----	Very limited		Very limited	
	Slope	1.00	Too steep for	1.00
	Restricted	0.61	surface	
	permeability		application	
			Too steep for	0.94
			sprinkler	
			application	
			Too acid	0.77
			Filtering	0.01
			capacity	
Pence-----	Very limited		Very limited	
	Slope	1.00	Filtering	1.00
	Restricted	0.61	capacity	
	permeability		Too steep for	1.00
			surface	
			application	
			Too steep for	0.94
			sprinkler	
			application	
			Too acid	0.31
670E:				
Keweenaw-----	Very limited		Very limited	
	Slope	1.00	Too steep for	1.00
	Restricted	0.61	surface	
	permeability		application	
			Too steep for	1.00
			sprinkler	
			application	
			Too acid	0.77
			Filtering	0.01
			capacity	
Pence-----	Very limited		Very limited	
	Slope	1.00	Filtering	1.00
	Restricted	0.61	capacity	
	permeability		Too steep for	1.00
			surface	
			application	
			Too steep for	1.00
			sprinkler	
			application	
			Too acid	0.31
671B:				
Spoonerhill, stony--	Very limited		Very limited	
	Restricted	1.00	Depth to	0.99
	permeability		saturated zone	
	Depth to	0.99	Too acid	0.31
	saturated zone		Restricted	0.21
			permeability	
			Too steep for	0.08
			surface	
			application	
			Filtering	0.01
			capacity	



Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
671B: Spoonerhill-----	Very limited		Very limited	
	Restricted permeability	1.00	Depth to saturated zone	0.99
	Depth to saturated zone	0.99	Too acid	0.31
			Restricted permeability	0.21
			Too steep for surface application	0.08
			Filtering capacity	0.01
680B: Stanberry, stony----	Very limited		Very limited	
	Restricted permeability	1.00	Filtering capacity	1.00
	Depth to saturated zone	0.99	Depth to saturated zone	0.99
			Restricted permeability	0.21
			Too steep for surface application	0.08
			Too acid	0.03
Pence, stony-----	Somewhat limited		Very limited	
	Restricted permeability	0.61	Filtering capacity	1.00
			Too acid	0.31
			Too steep for surface application	0.08
683A: Tipler-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Filtering capacity	1.00
	Restricted permeability	1.00	Depth to saturated zone	0.86
			Too acid	0.31
706A: Winterfield-----	Very limited		Very limited	
	Flooding	1.00	Filtering capacity	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
			Flooding	1.00
Totagatic-----	Very limited		Very limited	
	Flooding	1.00	Filtering capacity	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Flooding	1.00
			Ponding	1.00
			Too acid	0.42

Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
724A: Rib-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Filtering capacity	1.00
	Restricted permeability	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00
			Too acid	0.31
Rock outcrop-----	Not rated		Not rated	
726B: Sissabagama-----	Very limited		Very limited	
	Restricted permeability	1.00	Filtering capacity	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	0.86
			Restricted permeability	0.60
			Too acid	0.31
733A: Wozny-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	1.00	Ponding	1.00
	Ponding	1.00	Too acid	0.31
			Filtering capacity	0.01
771A: Lenroot-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Filtering capacity	1.00
			Depth to saturated zone	0.99
			Too acid	0.42
827A: Scoba-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Filtering capacity	1.00
	Restricted permeability	1.00	Depth to saturated zone	0.99
			Too acid	0.31
853C: Frogcreek-----	Very limited		Very limited	
	Restricted permeability	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Too steep for surface application	1.00
	Slope	1.00	Too acid	0.31
			Too steep for sprinkler application	0.22
			Restricted permeability	0.21

Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
853C: Stinnett-----	Very limited Restricted permeability Depth to saturated zone	1.00  1.00	Very limited Depth to saturated zone Too acid Restricted permeability	1.00  0.31 0.21
Wozny-----	Very limited Depth to saturated zone Restricted permeability Ponding	1.00  1.00 1.00	Very limited Depth to saturated zone Ponding Too acid Filtering capacity	1.00  1.00 0.31 0.01
856B: Stinnett-----	Very limited Restricted permeability Depth to saturated zone	1.00  1.00	Very limited Depth to saturated zone Too acid Restricted permeability	1.00  0.31 0.21
857B: Frogcreek-----	Very limited Restricted permeability Depth to saturated zone	1.00  1.00	Very limited Depth to saturated zone Too acid Restricted permeability Too steep for surface application	1.00  0.31 0.21 0.08
857C: Frogcreek-----	Very limited Restricted permeability Depth to saturated zone Slope	1.00  1.00 1.00	Very limited Depth to saturated zone Too steep for surface application Too steep for sprinkler application Too acid Restricted permeability	1.00  1.00  0.78  0.31 0.21
873B: Stanberry-----	Very limited Restricted permeability Depth to saturated zone	1.00  0.99	Very limited Filtering capacity Depth to saturated zone Restricted permeability Too steep for surface application Too acid	1.00  0.99 0.21 0.08 0.03

Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
873C: Stanberry-----	Very limited		Very limited	
	Restricted permeability	1.00	Filtering capacity	1.00
	Slope	1.00	Too steep for surface application	1.00
	Depth to saturated zone	0.99	Depth to saturated zone	0.99
			Too steep for sprinkler application	0.94
			Restricted permeability	0.21
873D: Stanberry-----	Very limited		Very limited	
	Slope	1.00	Filtering capacity	1.00
	Restricted permeability	1.00	Too steep for surface application	1.00
	Depth to saturated zone	0.99	Too steep for sprinkler application	1.00
			Depth to saturated zone	0.99
			Restricted permeability	0.21
905A: Cublake-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Filtering capacity	1.00
	Restricted permeability	1.00	Depth to saturated zone	0.86
	Too acid	0.03	Too acid	0.77
926A: Flink-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Filtering capacity	1.00
	Restricted permeability	1.00	Depth to saturated zone	1.00
	Too acid	0.03	Too acid	0.77
943D: Stanberry-----	Very limited		Very limited	
	Restricted permeability	1.00	Filtering capacity	1.00
	Slope	1.00	Too steep for surface application	1.00
	Depth to saturated zone	0.99	Too steep for sprinkler application	1.00
			Depth to saturated zone	0.99
			Restricted permeability	0.21

Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
943D: Greenwood-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	1.00	Too acid	1.00
	Ponding	1.00	Ponding	1.00
	Too acid	0.77	Filtering capacity	0.01
948A: Billyboy-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Filtering capacity	1.00
	Restricted permeability	1.00	Depth to saturated zone	1.00
			Too acid	0.31
970C: Keweenaw-----	Very limited		Very limited	
	Slope	1.00	Too steep for surface application	1.00
	Restricted permeability	0.61	Too steep for sprinkler application	0.94
			Too acid	0.77
			Filtering capacity	0.01
Pence-----	Very limited		Very limited	
	Slope	1.00	Filtering capacity	1.00
	Restricted permeability	0.61	Too steep for surface application	1.00
			Too steep for sprinkler application	0.94
			Too acid	0.31
Greenwood-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Filtering capacity	1.00
	Ponding	1.00	Depth to saturated zone	1.00
	Too acid	0.77	Too acid	1.00
	Restricted permeability	0.61	Ponding	1.00
970E: Keweenaw-----	Very limited		Very limited	
	Slope	1.00	Too steep for surface application	1.00
	Restricted permeability	0.61	Too steep for sprinkler application	1.00
			Too acid	0.77
			Filtering capacity	0.01

Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
970E:				
Pence-----	Very limited		Very limited	
	Slope	1.00	Filtering	1.00
	Restricted	0.61	capacity	
	permeability		Too steep for	1.00
			surface	
			application	
			Too steep for	1.00
			sprinkler	
			application	
			Too acid	0.31
Greenwood-----	Very limited		Very limited	
	Depth to	1.00	Filtering	1.00
	saturated zone		capacity	
	Ponding	1.00	Depth to	1.00
	Too acid	0.77	saturated zone	
	Restricted	0.61	Too acid	1.00
	permeability		Ponding	1.00
1070C:				
Fremstadt-----	Very limited		Very limited	
	Slope	1.00	Too steep for	1.00
	Restricted	0.31	surface	
	permeability		application	
			Too steep for	0.78
			sprinkler	
			application	
			Too acid	0.31
			Filtering	0.01
			capacity	
Cress-----	Very limited		Very limited	
	Restricted	1.00	Filtering	1.00
	permeability		capacity	
	Slope	1.00	Too steep for	1.00
			surface	
			application	
			Too steep for	0.50
			sprinkler	
			application	
			Too acid	0.31
1070D:				
Fremstadt-----	Very limited		Very limited	
	Slope	1.00	Too steep for	1.00
	Restricted	0.31	surface	
	permeability		application	
			Too steep for	1.00
			sprinkler	
			application	
			Too acid	0.31
			Filtering	0.01
			capacity	

Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
1070D: Cress-----	Very limited Slope Restricted permeability	1.00 1.00	Very limited Filtering capacity Too steep for surface application Too steep for sprinkler application Too acid	1.00 1.00 1.00 1.00 0.31
1080B: Spoonerhill-----	Very limited Restricted permeability Depth to saturated zone	1.00 0.99	Very limited Depth to saturated zone Too acid Restricted permeability Too steep for surface application Filtering capacity	0.99 0.31 0.21 0.08 0.01
Spoonerhill, stony--	Very limited Restricted permeability Depth to saturated zone	1.00 0.99	Very limited Depth to saturated zone Too acid Restricted permeability Too steep for surface application Filtering capacity	0.99 0.31 0.21 0.08 0.01
Cress-----	Very limited Restricted permeability	1.00	Very limited Filtering capacity Too acid	1.00 0.31
1653C: Stanberry-----	Very limited Restricted permeability Slope Depth to saturated zone	1.00 1.00 0.99	Very limited Filtering capacity Too steep for surface application Depth to saturated zone Too steep for sprinkler application Restricted permeability	1.00 1.00 0.99 0.50 0.21

Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
1653C: Parkfalls-----	Very limited Restricted permeability Depth to saturated zone	1.00  1.00	Very limited Depth to saturated zone Too acid Restricted permeability	1.00  0.77 0.21
Wozny-----	Very limited Depth to saturated zone Restricted permeability Ponding	1.00  1.00 1.00	Very limited Depth to saturated zone Ponding Too acid Filtering capacity	1.00  1.00 0.31 0.01
2015: Pits-----	Not rated		Not rated	
2050: Landfill-----	Not rated		Not rated	
3011A: Barronett-----	Very limited Restricted permeability Depth to saturated zone Ponding	1.00  1.00 1.00	Very limited Depth to saturated zone Ponding Too acid Restricted permeability	1.00  1.00 0.31 0.21
3125A: Meehan-----	Very limited Depth to saturated zone	1.00	Very limited Filtering capacity Depth to saturated zone Too acid	1.00  1.00 0.85
3126A: Wurtsmith-----	Very limited Depth to saturated zone Too acid	1.00  0.03	Very limited Filtering capacity Too acid Depth to saturated zone	1.00  1.00 0.99
3276A: Au Gres-----	Very limited Depth to saturated zone Restricted permeability	1.00  1.00	Very limited Filtering capacity Depth to saturated zone	1.00  1.00



Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
3312B: Glendenning, very stony-----	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Too acid Restricted permeability	1.00 0.31 0.21
Glendenning-----	Very limited Restricted permeability Depth to saturated zone	1.00 1.00	Very limited Depth to saturated zone Too acid Restricted permeability	1.00 0.31 0.21
3336A: Fenander-----	Very limited Restricted permeability Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 0.21
3403A: Loxley-----	Very limited Depth to saturated zone Ponding Too acid Restricted permeability	1.00 1.00 0.77 0.69	Very limited Filtering capacity Depth to saturated zone Too acid Ponding	1.00 1.00 1.00 1.00
Beseman-----	Very limited Restricted permeability Depth to saturated zone Ponding	1.00 1.00 1.00	Very limited Depth to saturated zone Too acid Ponding Restricted permeability	1.00 1.00 1.00 0.21
Dawson-----	Very limited Depth to saturated zone Restricted permeability Ponding Too acid	1.00 1.00 1.00 0.77	Very limited Filtering capacity Depth to saturated zone Too acid Ponding Low adsorption	1.00 1.00 1.00 1.00 0.01

Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
3424C: Frogcreek-----	Very limited		Very limited	
	Restricted permeability	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Too steep for surface application	1.00
	Slope	1.00	Too acid	0.31
			Too steep for sprinkler application	0.22
			Restricted permeability	0.21
Magroc-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Depth to bedrock	1.00	Depth to bedrock	0.42
	Restricted permeability	1.00	Too acid	0.31
Stinnett-----	Very limited		Very limited	
	Restricted permeability	1.00	Depth to saturated zone	1.00
	Depth to saturated zone	1.00	Too acid	0.31
			Restricted permeability	0.21
Rock outcrop-----	Not rated		Not rated	
3446A: Newson-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Filtering capacity	1.00
	Ponding	1.00	Depth to saturated zone	1.00
	Too acid	0.07	Too acid	1.00
			Ponding	1.00
3448B: Grettum-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Filtering capacity	1.00
			Too acid	0.85
3448C: Grettum-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Filtering capacity	1.00
	Slope	1.00	Too steep for surface application	1.00
			Too acid	0.85
			Too steep for sprinkler application	0.50

Table 22a.--Agricultural Waste Management--Continued

Map symbol and soil name	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
	Rating class and limiting features	Value	Rating class and limiting features	Value
3516A: Slimlake-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Filtering capacity	1.00
	Restricted permeability	0.31	Depth to saturated zone	0.86
			Too acid	0.42
3629B: Perida-----	Very limited		Very limited	
	Restricted permeability	1.00	Filtering capacity	1.00
	Depth to saturated zone	0.09	Restricted permeability	1.00
			Too acid	0.85
			Depth to saturated zone	0.09
M-W: Miscellaneous water	Not rated		Not rated	
W: Water-----	Not rated		Not rated	

Table 22b.--Agricultural Waste Management

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. "Not rated" indicates that data are not available or that no rating is applicable. See text for further explanation of ratings in this table)

Map symbol and soil name	Application of manure and food- processing waste	Application of sewage sludge	
	Rating class and limiting features	Value	Rating class and limiting features
3A:			
Totagatic-----	Very limited		Very limited
	Filtering capacity	1.00	Filtering capacity
	Depth to saturated zone	1.00	Depth to saturated zone
	Flooding	1.00	Flooding
	Ponding	1.00	Low adsorption
	Leaching	0.90	Ponding
Bowstring-----	Very limited		Very limited
	Filtering capacity	1.00	Filtering capacity
	Depth to saturated zone	1.00	Depth to saturated zone
	Flooding	1.00	Flooding
	Low adsorption	1.00	Low adsorption
	Ponding	1.00	Ponding
Ausable-----	Very limited		Very limited
	Filtering capacity	1.00	Filtering capacity
	Depth to saturated zone	1.00	Depth to saturated zone
	Flooding	1.00	Flooding
	Ponding	1.00	Low adsorption
	Leaching	0.90	Ponding
22A:			
Comstock-----	Very limited		Very limited
	Depth to saturated zone	1.00	Depth to saturated zone
	Restricted permeability	0.41	Too acid
	Too acid	0.08	Restricted permeability
24A:			
Poskin-----	Very limited		Very limited
	Filtering capacity	1.00	Filtering capacity
	Depth to saturated zone	1.00	Depth to saturated zone
	Too acid	0.08	Too acid
27A:			
Scott Lake-----	Very limited		Very limited
	Filtering capacity	1.00	Filtering capacity
	Depth to saturated zone	0.86	Depth to saturated zone
	Too acid	0.08	Too acid
	Droughty	0.05	Droughty

Table 22b.--Agricultural Waste Management--Continued

Map symbol and soil name	Application of manure and food- processing waste		Application of sewage sludge	
	Rating class and limiting features	Value	Rating class and limiting features	Value
28B:				
Haugen, very stony--	Very limited		Very limited	
	Depth to	0.99	Depth to	0.99
	saturated zone		saturated zone	
	Restricted	0.89	Too acid	0.91
	permeability		Restricted	0.78
	Too stony	0.50	permeability	
	Too acid	0.32		
Haugen-----	Very limited		Very limited	
	Depth to	0.99	Depth to	0.99
	saturated zone		saturated zone	
	Restricted	0.89	Too acid	0.91
	permeability		Restricted	0.78
	Too acid	0.32	permeability	
Rosholt, very stony	Very limited		Very limited	
	Filtering	1.00	Filtering	1.00
	capacity		capacity	
	Dense layer	1.00	Droughty	0.40
	Too stony	0.50	Too acid	0.31
	Droughty	0.40		
	Too acid	0.08		
Rosholt-----	Very limited		Very limited	
	Filtering	1.00	Filtering	1.00
	capacity		capacity	
	Dense layer	1.00	Droughty	0.33
	Droughty	0.33	Too acid	0.31
	Too acid	0.08		
28C:				
Haugen, very stony--	Very limited		Very limited	
	Depth to	0.99	Depth to	0.99
	saturated zone		saturated zone	
	Restricted	0.89	Too acid	0.91
	permeability		Restricted	0.78
	Too stony	0.50	permeability	
	Too acid	0.32	Slope	0.04
	Slope	0.04		
Haugen-----	Very limited		Very limited	
	Depth to	0.99	Depth to	0.99
	saturated zone		saturated zone	
	Restricted	0.89	Too acid	0.91
	permeability		Restricted	0.78
	Too acid	0.32	permeability	
	Slope	0.04	Slope	0.04
Rosholt, very stony	Very limited		Very limited	
	Filtering	1.00	Filtering	1.00
	capacity		capacity	
	Dense layer	1.00	Droughty	0.40
	Too stony	0.50	Too acid	0.31
	Droughty	0.40	Slope	0.04
	Too acid	0.08		

Table 22b.--Agricultural Waste Management--Continued

Map symbol and soil name	Application of manure and food- processing waste	Application of sewage sludge		
	Rating class and limiting features	Value	Rating class and limiting features	Value
28C: Rosholt-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Dense layer	1.00	Droughty	0.33
	Droughty	0.33	Too acid	0.31
	Too acid	0.08	Slope	0.04
	Slope	0.04		
33B: Chetek-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Droughty	0.94	Droughty	0.94
	Too acid	0.02	Too acid	0.07
33C: Chetek-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Droughty	0.94	Droughty	0.94
	Slope	0.04	Too acid	0.07
	Too acid	0.02	Slope	0.04
38A: Rosholt-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Dense layer	1.00	Droughty	0.33
	Droughty	0.33	Too acid	0.31
	Too acid	0.08		
38B: Rosholt-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Dense layer	1.00	Droughty	0.33
	Droughty	0.33	Too acid	0.31
	Too acid	0.08		
38C: Rosholt-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Dense layer	1.00	Droughty	0.33
	Droughty	0.33	Too acid	0.31
	Too acid	0.08	Slope	0.04
	Slope	0.04		
38D: Rosholt-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Dense layer	1.00	Slope	1.00
	Slope	1.00	Droughty	0.33
	Droughty	0.33	Too acid	0.31
	Too acid	0.08		

Table 22b.--Agricultural Waste Management--Continued

Map symbol and soil name	Application of manure and food- processing waste	Application of sewage sludge		
	Rating class and limiting features	Value	Rating class and limiting features	Value
42D:				
Amery-----	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Too stony	0.50	Too acid	0.77
	Restricted permeability	0.41	Restricted permeability	0.31
	Too acid	0.22		
43B:				
Antigo-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Too acid	0.08	Too acid	0.31
43C:				
Antigo-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Slope	0.37	Slope	0.37
	Too acid	0.08	Too acid	0.31
43D:				
Antigo-----	Very limited		Very limited	
	Slope	1.00	Filtering	
	Filtering capacity	1.00	capacity	1.00
	Too acid	0.08	Slope	1.00
			Too acid	0.31
48A:				
Brill-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too acid	0.08	Too acid	0.31
63A:				
Crystal Lake-----	Very limited		Very limited	
	Depth to saturated zone	0.99	Depth to saturated zone	0.99
	Restricted permeability	0.41	Too acid	0.31
	Too acid	0.08	Restricted permeability	0.31
63B:				
Crystal Lake-----	Very limited		Very limited	
	Depth to saturated zone	0.99	Depth to saturated zone	0.99
	Restricted permeability	0.41	Too acid	0.31
	Too acid	0.08	Restricted permeability	0.31
63C:				
Crystal Lake-----	Very limited		Very limited	
	Depth to saturated zone	0.99	Depth to saturated zone	0.99
	Restricted permeability	0.41	Too acid	0.31
	Too acid	0.08	Restricted permeability	0.31
	Slope	0.04	Slope	0.04

Table 22b.--Agricultural Waste Management--Continued

Map symbol and soil name	Application of manure and food- processing waste		Application of sewage sludge	
	Rating class and limiting features	Value	Rating class and limiting features	Value
63E:				
Crystal Lake-----	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Depth to saturated zone	0.86	Depth to saturated zone	0.86
	Restricted permeability	0.41	Too acid	0.31
	Too acid	0.08	Restricted permeability	0.31
64A:				
Totagatic-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	1.00
	Ponding	1.00	Low adsorption	1.00
	Leaching	0.90	Ponding	1.00
Winterfield-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	1.00
	Leaching	0.90	Droughty	0.52
	Droughty	0.52		
69B:				
Keweenaw-----	Somewhat limited		Somewhat limited	
	Too acid	0.22	Too acid	0.77
	Filtering capacity	0.01	Filtering capacity	0.01
Sayner-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Droughty	0.99	Droughty	0.99
	Leaching	0.45	Too acid	0.77
	Too acid	0.22		
Vilas-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Leaching	0.45	Too acid	0.31
	Too acid	0.08	Droughty	0.04
	Droughty	0.04		
69C:				
Keweenaw-----	Somewhat limited		Somewhat limited	
	Too acid	0.22	Too acid	0.77
	Slope	0.16	Slope	0.16
	Filtering capacity	0.01	Filtering capacity	0.01



Table 22b.--Agricultural Waste Management--Continued

Map symbol and soil name	Application of manure and food- processing waste	Application of sewage sludge		
	Rating class and limiting features	Value	Rating class and limiting features	Value
69C:				
Sayner-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Droughty	0.99	Droughty	0.99
	Leaching	0.45	Too acid	0.77
	Too acid	0.22	Slope	0.16
	Slope	0.16		
Vilas-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Leaching	0.45	Too acid	0.31
	Slope	0.16	Slope	0.16
	Too acid	0.08	Droughty	0.04
	Droughty	0.04		
69E:				
Keweenaw-----	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Too acid	0.22	Too acid	0.77
	Filtering capacity	0.01	Filtering capacity	0.01
Sayner-----	Very limited		Very limited	
	Slope	1.00	Filtering capacity	1.00
	Filtering capacity	1.00	Slope	1.00
	Droughty	0.99	Droughty	0.99
	Leaching	0.45	Too acid	0.77
	Too acid	0.22		
Vilas-----	Very limited		Very limited	
	Slope	1.00	Filtering capacity	1.00
	Filtering capacity	1.00	Slope	1.00
	Leaching	0.45	Too acid	0.31
	Too acid	0.08	Droughty	0.04
	Droughty	0.04		
74B:				
Vilas-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Leaching	0.45	Too acid	0.31
	Too acid	0.08	Droughty	0.04
	Droughty	0.04		
74C:				
Vilas-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Leaching	0.45	Slope	0.37
	Slope	0.37	Too acid	0.31
	Too acid	0.08	Droughty	0.04
	Droughty	0.04		

Table 22b.--Agricultural Waste Management--Continued

Map symbol and soil name	Application of manure and food- processing waste		Application of sewage sludge	
	Rating class and limiting features	Value	Rating class and limiting features	Value
74D: Vilas-----	Very limited		Very limited	
	Slope	1.00	Filtering	1.00
	Filtering capacity	1.00	capacity	
	Leaching	0.45	Slope	1.00
	Too acid	0.08	Too acid	0.31
	Droughty	0.04	Droughty	0.04
100B: Menahga-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Droughty	0.77	Too acid	0.99
	Too acid	0.50	Droughty	0.77
	Leaching	0.45		
100C: Menahga-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Too acid	0.50	Low adsorption	1.00
	Leaching	0.45	Too acid	0.99
	Droughty	0.40	Droughty	0.40
	Slope	0.04	Slope	0.04
100D: Menahga-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Slope	1.00	Low adsorption	1.00
	Too acid	0.50	Slope	1.00
	Leaching	0.45	Too acid	0.99
	Droughty	0.40	Droughty	0.40
127D: Amery-----	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Too stony	0.50	Too acid	0.77
	Restricted permeability	0.41	Restricted permeability	0.31
	Too acid	0.22		
Rosholt-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Dense layer	1.00	Slope	1.00
	Slope	1.00	Droughty	0.40
	Too stony	0.50	Too acid	0.31
	Droughty	0.40		
127E: Amery-----	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Too stony	0.50	Too acid	0.77
	Restricted permeability	0.41	Restricted permeability	0.31
	Too acid	0.22		

Table 22b.--Agricultural Waste Management--Continued

Map symbol and soil name	Application of manure and food- processing waste		Application of sewage sludge	
	Rating class and limiting features	Value	Rating class and limiting features	Value
127E: Rosholt-----	Very limited		Very limited	
	Slope	1.00	Filtering	1.00
	Filtering capacity	1.00	capacity	
	Dense layer	1.00	Slope	1.00
	Too stony	0.50	Droughty	0.40
	Droughty	0.40	Too acid	0.31
156B: Magnor, very stony--	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Dense layer	1.00	Too acid	0.85
	Restricted permeability	0.74	Restricted	0.60
	Too stony	0.50	permeability	
	Too acid	0.27		
Magnor-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Dense layer	1.00	Too acid	0.85
	Restricted permeability	0.74	Restricted	0.60
	Too acid	0.27	permeability	
157B: Freeon, very stony--	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Dense layer	1.00	Too acid	0.77
	Restricted permeability	0.74	Restricted	0.60
	Too stony	0.50	permeability	
	Too acid	0.22		
Freeon-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Dense layer	1.00	Too acid	0.85
	Restricted permeability	0.74	Restricted	0.60
	Too acid	0.27	permeability	
157C: Freeon, very stony--	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Dense layer	1.00	Too acid	0.77
	Restricted permeability	0.74	Restricted	0.60
	Too stony	0.50	permeability	
	Too acid	0.22	Slope	0.04

Table 22b.--Agricultural Waste Management--Continued

Map symbol and soil name	Application of manure and food- processing waste	Application of sewage sludge		
	Rating class and limiting features	Value	Rating class and limiting features	Value
157C: Freeon-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Dense layer	1.00	Too acid	0.85
	Restricted permeability	0.74	Restricted permeability	0.60
	Too acid	0.27	Slope	0.04
	Slope	0.04		
160A: Oesterle-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too acid	0.22	Too acid	0.77
	Droughty	0.09	Droughty	0.09
182B: Padus-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Too acid	0.08	Too acid	0.31
182C: Padus-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Slope	0.37	Slope	0.37
	Too acid	0.08	Too acid	0.31
192A: Worcester-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too acid	0.08	Too acid	0.31
	Droughty	0.04	Droughty	0.04
193A: Minocqua-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Low adsorption	1.00
	Leaching	0.70	Ponding	1.00
	Too acid	0.02	Too acid	0.07
215B: Pence-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Dense layer	1.00	Droughty	0.74
	Droughty	0.74	Too acid	0.31
	Too acid	0.08		

Table 22b.--Agricultural Waste Management--Continued

Map symbol and soil name	Application of manure and food- processing waste		Application of sewage sludge	
	Rating class and limiting features	Value	Rating class and limiting features	Value
215C: Pence-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Dense layer	1.00	Droughty	0.74
	Droughty	0.74	Slope	0.37
	Slope	0.37	Too acid	0.31
	Too acid	0.08		
215D: Pence-----	Very limited		Very limited	
	Slope	1.00	Filtering capacity	1.00
	Filtering capacity	1.00	Slope	1.00
	Dense layer	1.00	Droughty	0.74
	Droughty	0.74	Too acid	0.31
	Too acid	0.08		
315A: Rib-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Ponding	1.00
	Leaching	0.70	Too acid	0.31
	Too acid	0.08		
337A: Plover-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	0.89	Restricted permeability	0.78
	Too acid	0.08	Too acid	0.31
368B: Mahtomedi-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Droughty	1.00	Droughty	1.00
	Leaching	0.45	Too acid	0.42
	Too acid	0.11		
Cress-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Droughty	0.60	Droughty	0.60
	Leaching	0.45	Too acid	0.31
	Too acid	0.08		
368C: Mahtomedi-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Droughty	1.00	Droughty	1.00
	Leaching	0.45	Too acid	0.42
	Too acid	0.11	Slope	0.04
	Slope	0.04		

Table 22b.--Agricultural Waste Management--Continued

Map symbol and soil name	Application of manure and food- processing waste	Application of sewage sludge	
	Rating class and limiting features	Value	Rating class and limiting features
368C:			
Cress-----	Very limited		Very limited
	Filtering capacity	1.00	Filtering capacity
	Droughty	0.60	Droughty
	Leaching	0.45	Too acid
	Too acid	0.08	Slope
	Slope	0.04	
368D:			
Mahtomedi-----	Very limited		Very limited
	Filtering capacity	1.00	Filtering capacity
	Slope	1.00	Slope
	Droughty	1.00	Droughty
	Leaching	0.45	Too acid
	Too acid	0.11	
Cress-----	Very limited		Very limited
	Filtering capacity	1.00	Filtering capacity
	Slope	1.00	Slope
	Droughty	0.60	Droughty
	Leaching	0.45	Too acid
	Too acid	0.08	
371A:			
Croswell-----	Very limited		Very limited
	Filtering capacity	1.00	Filtering capacity
	Depth to saturated zone	0.99	Depth to saturated zone
	Droughty	0.67	Droughty
	Leaching	0.45	Too acid
	Too acid	0.08	
380B:			
Cress-----	Very limited		Very limited
	Filtering capacity	1.00	Filtering capacity
	Droughty	0.60	Droughty
	Leaching	0.45	Too acid
	Too acid	0.08	
Rosholt-----	Very limited		Very limited
	Filtering capacity	1.00	Filtering capacity
	Dense layer	1.00	Droughty
	Droughty	0.33	Too acid
	Too acid	0.08	
380C:			
Cress-----	Very limited		Very limited
	Filtering capacity	1.00	Filtering capacity
	Droughty	0.60	Droughty
	Leaching	0.45	Too acid
	Too acid	0.08	Slope
	Slope	0.04	

Table 22b.--Agricultural Waste Management--Continued

Map symbol and soil name	Application of manure and food- processing waste	Application of sewage sludge		
	Rating class and limiting features	Value	Rating class and limiting features	Value
380C: Rosholt-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Dense layer	1.00	Droughty	0.33
	Droughty	0.33	Too acid	0.31
	Too acid	0.08	Slope	0.04
	Slope	0.04		
380D: Cress-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Slope	1.00	Slope	1.00
	Droughty	0.60	Droughty	0.60
	Leaching	0.45	Too acid	0.31
	Too acid	0.08		
Rosholt-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Dense layer	1.00	Slope	1.00
	Slope	1.00	Droughty	0.33
	Droughty	0.33	Too acid	0.31
	Too acid	0.08		
383B: Mahtomedi-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Droughty	1.00	Droughty	1.00
	Leaching	0.45	Too acid	0.42
	Too acid	0.11		
383C: Mahtomedi-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Droughty	1.00	Droughty	1.00
	Leaching	0.45	Too acid	0.42
	Too acid	0.11	Slope	0.04
	Slope	0.04		
383D: Mahtomedi-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Slope	1.00	Slope	1.00
	Droughty	1.00	Droughty	1.00
	Leaching	0.45	Too acid	0.42
	Too acid	0.11		
396B: Friendship-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Droughty	0.90	Droughty	0.90
	Leaching	0.45	Too acid	0.21
	Too acid	0.05		

Table 22b.--Agricultural Waste Management--Continued

Map symbol and soil name	Application of manure and food- processing waste		Application of sewage sludge	
	Rating class and limiting features	Value	Rating class and limiting features	Value
396B:				
Wurtsmith-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Depth to saturated zone	0.99	Too acid	1.00
	Droughty	0.87	Depth to saturated zone	0.99
	Too acid	0.78	Droughty	0.87
	Leaching	0.45		
Grayling-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Droughty	1.00	Too acid	1.00
	Too acid	0.78	Droughty	1.00
	Leaching	0.45		
397A:				
Perchlake-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Droughty	0.25	Too acid	0.77
	Too acid	0.22	Droughty	0.25
399B:				
Grayling-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Droughty	1.00	Too acid	1.00
	Too acid	0.78	Droughty	1.00
	Leaching	0.45		
399C:				
Grayling-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Droughty	1.00	Too acid	1.00
	Too acid	0.78	Droughty	1.00
	Leaching	0.45	Slope	0.04
	Slope	0.04		
399D:				
Grayling-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Slope	1.00	Too acid	1.00
	Droughty	1.00	Slope	1.00
	Too acid	0.78	Droughty	1.00
	Leaching	0.45		
405A:				
Lupton-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Low adsorption	1.00
	Leaching	0.90	Ponding	1.00



Table 22b.--Agricultural Waste Management--Continued

Map symbol and soil name	Application of manure and food- processing waste	Application of sewage sludge		
	Rating class and limiting features	Value	Rating class and limiting features	Value
405A:				
Cathro-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Low adsorption	1.00
	Leaching	0.90	Ponding	1.00
	Too acid	0.02	Too acid	0.07
Tawas-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Low adsorption	1.00
	Leaching	0.90	Ponding	1.00
406A:				
Loxley-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Low adsorption	1.00
	Too acid	0.94	Too acid	1.00
	Leaching	0.90	Ponding	1.00
407A:				
Seelyville-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Low adsorption	1.00
	Leaching	0.90	Ponding	1.00
	Too acid	0.08	Too acid	0.31
Markey-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Low adsorption	1.00
	Leaching	0.90	Ponding	1.00
410A:				
Seelyville-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Low adsorption	1.00
	Leaching	0.90	Ponding	1.00
	Too acid	0.08	Too acid	0.31
Cathro-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Low adsorption	1.00
	Leaching	0.90	Ponding	1.00
	Too acid	0.02	Too acid	0.07

Table 22b.--Agricultural Waste Management--Continued

Map symbol and soil name	Application of manure and food- processing waste		Application of sewage sludge	
	Rating class and limiting features	Value	Rating class and limiting features	Value
412A: Rifle-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Low adsorption	1.00
	Leaching	0.90	Ponding	1.00
	Filtering capacity	0.01	Filtering capacity	0.01
Tacoosh-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Low adsorption	1.00
	Leaching	0.90	Ponding	1.00
415A: Greenwood-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Low adsorption	1.00
	Too acid	0.94	Too acid	1.00
	Leaching	0.90	Ponding	1.00
439B: Graycalm-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Too acid	0.50	Too acid	0.99
	Leaching	0.45	Droughty	0.25
	Droughty	0.25		
Menahga-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Too acid	0.50	Low adsorption	1.00
	Leaching	0.45	Too acid	0.99
	Droughty	0.39	Droughty	0.39
439C: Graycalm-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Too acid	0.50	Too acid	0.99
	Leaching	0.45	Droughty	0.25
	Droughty	0.25	Slope	0.04
	Slope	0.04		
Menahga-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Too acid	0.50	Low adsorption	1.00
	Leaching	0.45	Too acid	0.99
	Droughty	0.39	Droughty	0.39
	Slope	0.04	Slope	0.04

Table 22b.--Agricultural Waste Management--Continued

Map symbol and soil name	Application of manure and food- processing waste	Application of sewage sludge		
	Rating class and limiting features	Value	Rating class and limiting features	Value
439D: Graycalm-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Slope	1.00	Slope	1.00
	Too acid	0.50	Too acid	0.99
	Leaching	0.45	Droughty	0.25
	Droughty	0.25		
Menahga-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Slope	1.00	Low adsorption	1.00
	Too acid	0.50	Slope	1.00
	Leaching	0.45	Too acid	0.99
	Droughty	0.39	Droughty	0.39
441C: Freeon-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Dense layer	1.00	Too acid	0.85
	Restricted permeability	0.74	Restricted permeability	0.60
	Too stony	0.50	Slope	0.37
	Slope	0.37		
Cathro-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Low adsorption	1.00
	Leaching	0.90	Ponding	1.00
	Too acid	0.02	Too acid	0.07
442C: Haugen-----	Very limited		Very limited	
	Depth to saturated zone	0.99	Depth to saturated zone	0.99
	Restricted permeability	0.89	Too acid	0.91
	Too stony	0.50	Restricted permeability	0.78
	Too acid	0.32		
Greenwood-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Low adsorption	1.00
	Too acid	0.94	Too acid	1.00
	Leaching	0.90	Ponding	1.00
443D: Amery-----	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Too stony	0.50	Too acid	0.31
	Restricted permeability	0.41	Restricted permeability	0.31
	Too acid	0.08		

Table 22b.--Agricultural Waste Management--Continued

Map symbol and soil name	Application of manure and food- processing waste		Application of sewage sludge	
	Rating class and limiting features	Value	Rating class and limiting features	Value
443D: Greenwood-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Low adsorption	1.00
	Too acid	0.94	Too acid	1.00
	Leaching	0.90	Ponding	1.00
461A: Bowstring-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	1.00
	Low adsorption	1.00	Low adsorption	1.00
	Ponding	1.00	Ponding	1.00
484A: Greenwood-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Low adsorption	1.00
	Too acid	0.94	Too acid	1.00
	Leaching	0.90	Ponding	1.00
Beseman-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Low adsorption	1.00
	Too acid	0.94	Too acid	1.00
	Leaching	0.90	Ponding	1.00
	Restricted permeability	0.41	Restricted permeability	0.31
495B: Karlsborg-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	1.00	Restricted permeability	1.00
	Runoff	0.40	Too acid	0.77
	Too acid	0.22		
Grettum-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Leaching	0.45	Too acid	0.85
	Too acid	0.27	Droughty	0.02
	Droughty	0.02		

Table 22b.--Agricultural Waste Management--Continued

Map symbol and soil name	Application of manure and food- processing waste	Application of sewage sludge		
	Rating class and limiting features	Value	Rating class and limiting features	Value
495B: Perida-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Restricted permeability	1.00	Restricted permeability	1.00
	Too acid	0.27	Too acid	0.85
	Depth to saturated zone	0.09	Depth to saturated zone	0.09
495C: Karlsborg-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	1.00	Restricted permeability	1.00
	Runoff	0.40	Too acid	0.77
	Too acid	0.22	Slope	0.04
Grettum-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Leaching	0.45	Too acid	0.85
	Too acid	0.27	Slope	0.04
	Slope	0.04	Droughty	0.02
	Droughty	0.02		
Perida-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Restricted permeability	1.00	Restricted permeability	1.00
	Too acid	0.27	Too acid	0.85
	Depth to saturated zone	0.09	Depth to saturated zone	0.09
	Slope	0.04	Slope	0.04
495D: Karlsborg-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	1.00	Restricted permeability	1.00
	Slope	1.00	Slope	1.00
	Runoff	0.40	Too acid	0.77
Grettum-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Slope	1.00	Slope	1.00
	Leaching	0.45	Too acid	0.85
	Too acid	0.27	Droughty	0.02
	Droughty	0.02		

Table 22b.--Agricultural Waste Management--Continued

Map symbol and soil name	Application of manure and food- processing waste	Application of sewage sludge		
	Rating class and limiting features	Value	Rating class and limiting features	Value
495D: Perida-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Restricted permeability	1.00	Restricted permeability	1.00
	Slope	1.00	Slope	1.00
	Too acid	0.27	Too acid	0.85
	Depth to saturated zone	0.09	Depth to saturated zone	0.09
497A: Meenon-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Restricted permeability	1.00	Restricted permeability	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too acid	0.08	Too acid	0.31
	Droughty	0.03	Droughty	0.03
515A: Manitowish-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Dense layer	1.00	Depth to saturated zone	0.86
	Depth to saturated zone	0.86	Droughty	0.63
	Droughty	0.63	Too acid	0.31
	Too acid	0.08		
521A: Dody-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Restricted permeability	1.00	Low adsorption	1.00
	Ponding	1.00	Restricted permeability	1.00
	Leaching	0.50	Ponding	1.00
524E: Rock outcrop-----	Not rated		Not rated	
Frogcreek-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Dense layer	1.00	Too acid	0.31
	Too stony	0.50	Restricted permeability	0.31
	Restricted permeability	0.41		
	Too acid	0.08		
Metonga-----	Very limited		Very limited	
	Slope	1.00	Low adsorption	1.00
	Too stony	0.47	Slope	1.00
	Depth to bedrock	0.42	Depth to bedrock	0.42
	Droughty	0.13	Too acid	0.31
	Too acid	0.08	Droughty	0.13

Table 22b.--Agricultural Waste Management--Continued

Map symbol and soil name	Application of manure and food- processing waste		Application of sewage sludge	
	Rating class and limiting features	Value	Rating class and limiting features	Value
542B: Haugen, very stony--	Very limited Depth to saturated zone Restricted permeability Too stony Too acid	 0.99  0.89 0.50 0.32	Very limited Depth to saturated zone Too acid Restricted permeability	 0.99  0.91 0.78
Haugen-----	Very limited Depth to saturated zone Restricted permeability Too acid	 0.99  0.89 0.32	Very limited Depth to saturated zone Too acid Restricted permeability	 0.99  0.91 0.78
542C: Haugen, very stony--	Very limited Depth to saturated zone Restricted permeability Too stony Too acid Slope	 0.99  0.89 0.50 0.32 0.04	Very limited Depth to saturated zone Too acid Restricted permeability Slope	 0.99  0.91 0.78  0.04
Haugen-----	Very limited Depth to saturated zone Restricted permeability Too acid Slope	 0.99  0.89 0.32 0.04	Very limited Depth to saturated zone Too acid Restricted permeability Slope	 0.99  0.91 0.78  0.04
543B: Anigon-----	Very limited Filtering capacity Too acid	 1.00  0.08	Very limited Filtering capacity Too acid	 1.00  0.31
543C2: Anigon-----	Very limited Filtering capacity Too acid Slope	 1.00  0.08 0.04	Very limited Filtering capacity Too acid Slope	 1.00  0.31 0.04
544F: Menahga-----	Very limited Slope Filtering capacity Too acid Leaching Droughty	 1.00 1.00  0.50 0.45 0.40	Very limited Filtering capacity Low adsorption Slope Too acid Droughty	 1.00  1.00 1.00 0.99 0.40

Table 22b.--Agricultural Waste Management--Continued

Map symbol and soil name	Application of manure and food- processing waste		Application of sewage sludge	
	Rating class and limiting features	Value	Rating class and limiting features	Value
544F: Mahtomedi-----	Very limited		Very limited	
	Slope	1.00	Filtering	1.00
	Filtering capacity	1.00	capacity	
	Droughty	1.00	Slope	1.00
	Leaching	0.45	Droughty	1.00
	Too acid	0.11	Too acid	0.42
555A: Fordum-----	Very limited		Very limited	
	Filtering	1.00	Filtering	1.00
	capacity		capacity	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Flooding	1.00	Flooding	1.00
	Ponding	1.00	Ponding	1.00
	Runoff	0.40		
574B: Sayner-----	Very limited		Very limited	
	Filtering	1.00	Filtering	1.00
	capacity		capacity	
	Droughty	0.99	Droughty	0.99
	Leaching	0.45	Too acid	0.77
	Too acid	0.22		
574C: Sayner-----	Very limited		Very limited	
	Filtering	1.00	Filtering	1.00
	capacity		capacity	
	Droughty	0.99	Droughty	0.99
	Leaching	0.45	Too acid	0.77
	Slope	0.37	Slope	0.37
	Too acid	0.22		
574E: Sayner-----	Very limited		Very limited	
	Slope	1.00	Filtering	1.00
	Filtering	1.00	capacity	
	capacity		Slope	1.00
	Droughty	0.99	Droughty	0.99
	Leaching	0.45	Too acid	0.77
	Too acid	0.22		
579B: Parkfalls-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Dense layer	1.00	Too acid	0.77
	Droughty	0.61	Droughty	0.61
	Too stony	0.50	Restricted	0.31
	Restricted	0.41	permeability	
	permeability		Depth to dense material	0.20
600A: Haplosaprists-----	Not rated		Not rated	
Psammaquents-----	Not rated		Not rated	



Table 22b.--Agricultural Waste Management--Continued

Map symbol and soil name	Application of manure and food- processing waste	Application of sewage sludge		
	Rating class and limiting features	Value	Rating class and limiting features	Value
615B: Cress-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Droughty	0.60	Droughty	0.60
	Leaching	0.45	Too acid	0.31
	Too acid	0.08		
615C: Cress-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Droughty	0.60	Droughty	0.60
	Leaching	0.45	Too acid	0.31
	Too acid	0.08	Slope	0.04
	Slope	0.04		
615D: Cress-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Slope	1.00	Slope	1.00
	Droughty	0.60	Droughty	0.60
	Leaching	0.45	Too acid	0.31
	Too acid	0.08		
623A: Capitola-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Low adsorption	1.00
	Leaching	0.70	Ponding	1.00
	Too stony	0.50	Depth to dense material	0.46
	Depth to dense material	0.46	Too acid	0.31
624A: Ossmer-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too acid	0.08	Too acid	0.31
632A: Aftad-----	Very limited		Very limited	
	Depth to saturated zone	0.99	Depth to saturated zone	0.99
	Restricted permeability	0.41	Too acid	0.31
	Too acid	0.08	Restricted permeability	0.30
632B: Aftad-----	Very limited		Very limited	
	Depth to saturated zone	0.99	Depth to saturated zone	0.99
	Restricted permeability	0.41	Too acid	0.31
	Too acid	0.08	Restricted permeability	0.30

Table 22b.--Agricultural Waste Management--Continued

Map symbol and soil name	Application of manure and food- processing waste		Application of sewage sludge	
	Rating class and limiting features	Value	Rating class and limiting features	Value
632C: Aftad-----	Very limited		Very limited	
	Depth to saturated zone	0.99	Depth to saturated zone	0.99
	Restricted permeability	0.41	Too acid	0.31
	Too acid	0.08	Restricted permeability	0.30
	Slope	0.04	Slope	0.04
633F: Pence-----	Very limited		Very limited	
	Slope	1.00	Filtering	1.00
	Filtering capacity	1.00	capacity	
	Dense layer	1.00	Slope	1.00
	Droughty	0.74	Droughty	0.74
	Too acid	0.08	Too acid	0.31
Padus-----	Very limited		Very limited	
	Slope	1.00	Filtering	1.00
	Filtering capacity	1.00	capacity	
	Too acid	0.08	Slope	1.00
			Too acid	0.31
648B: Sconsin-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Depth to dense material	0.54	Depth to dense material	0.54
	Too acid	0.08	Too acid	0.31
670C: Keweenaw-----	Somewhat limited		Somewhat limited	
	Leaching	0.45	Too acid	0.77
	Slope	0.37	Slope	0.37
	Too acid	0.22	Filtering	0.01
	Filtering capacity	0.01	capacity	
Pence-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering	1.00
	Dense layer	1.00	capacity	
	Droughty	0.74	Droughty	0.74
	Slope	0.37	Slope	0.37
	Too acid	0.08	Too acid	0.31
670E: Keweenaw-----	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Leaching	0.45	Too acid	0.77
	Too acid	0.22	Filtering	0.01
	Filtering capacity	0.01	capacity	

Table 22b.--Agricultural Waste Management--Continued

Map symbol and soil name	Application of manure and food- processing waste	Application of sewage sludge		
	Rating class and limiting features	Value	Rating class and limiting features	Value
670E: Pence-----	Very limited		Very limited	
	Slope	1.00	Filtering	1.00
	Filtering capacity	1.00	capacity	
	Dense layer	1.00	Slope	1.00
	Droughty	0.74	Droughty	0.74
	Too acid	0.08	Too acid	0.31
671B: Spoonerhill, stony--	Very limited		Very limited	
	Depth to saturated zone	0.99	Depth to saturated zone	0.99
	Leaching	0.45	Too acid	0.31
	Restricted permeability	0.41	Restricted permeability	0.31
	Too acid	0.08	Droughty	0.04
	Droughty	0.04	Filtering capacity	0.01
Spoonerhill-----	Very limited		Very limited	
	Depth to saturated zone	0.99	Depth to saturated zone	0.99
	Leaching	0.45	Too acid	0.31
	Restricted permeability	0.41	Restricted permeability	0.31
	Too acid	0.08	Droughty	0.04
	Droughty	0.04	Filtering capacity	0.01
680B: Stanberry, stony----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Dense layer	1.00	Low adsorption	1.00
	Depth to saturated zone	0.99	Depth to saturated zone	0.99
	Too stony	0.50	Restricted	0.31
	Restricted permeability	0.41	permeability	
			Droughty	0.06
Pence, stony-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Dense layer	1.00	Droughty	0.74
	Droughty	0.74	Too acid	0.31
	Too stony	0.50		
	Too acid	0.08		
683A: Tipler-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Depth to saturated zone	0.86	Depth to saturated zone	0.86
	Too acid	0.08	Too acid	0.31
	Droughty	0.03	Droughty	0.03

Table 22b.--Agricultural Waste Management--Continued

Map symbol and soil name	Application of manure and food- processing waste	Application of sewage sludge		
	Rating class and limiting features	Value	Rating class and limiting features	Value
706A: Winterfield-----	Very limited Filtering capacity Depth to saturated zone Flooding Leaching Droughty	 1.00 1.00 1.00 0.90 0.20	Very limited Filtering capacity Depth to saturated zone Flooding Droughty	 1.00 1.00 1.00 0.20
Totagatic-----	Very limited Filtering capacity Depth to saturated zone Flooding Ponding Runoff	 1.00 1.00 1.00 1.00 0.40	Very limited Filtering capacity Depth to saturated zone Flooding Ponding Too acid	 1.00 1.00 1.00 1.00 0.42
724A: Rib-----	Very limited Filtering capacity Depth to saturated zone Ponding Leaching Too acid	 1.00 1.00 1.00 0.70 0.08	Very limited Filtering capacity Depth to saturated zone Ponding Too acid	 1.00 1.00 1.00 0.31
Rock outcrop-----	Not rated		Not rated	
726B: Sissabagama-----	Very limited Filtering capacity Restricted permeability Depth to saturated zone Leaching Too acid	 1.00 0.89 0.86 0.45 0.08	Very limited Filtering capacity Depth to saturated zone Restricted permeability Too acid	 1.00 0.86 0.78 0.31
733A: Wozny-----	Very limited Depth to saturated zone Ponding Leaching Too stony Too acid	 1.00 1.00 0.70 0.50 0.08	Very limited Depth to saturated zone Low adsorption Ponding Too acid Filtering capacity	 1.00 1.00 1.00 0.31 0.01
771A: Lenroot-----	Very limited Filtering capacity Depth to saturated zone Droughty Leaching Too acid	 1.00 0.99 0.89 0.45 0.11	Very limited Filtering capacity Depth to saturated zone Droughty Too acid	 1.00 0.99 0.89 0.42

Table 22b.--Agricultural Waste Management--Continued

Map symbol and soil name	Application of manure and food- processing waste		Application of sewage sludge	
	Rating class and limiting features	Value	Rating class and limiting features	Value
827A: Scoba-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Depth to saturated zone	0.99	Depth to saturated zone	0.99
	Droughty	0.26	Too acid	0.31
	Too acid	0.08	Droughty	0.26
853C: Frogcreek-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Dense layer	1.00	Too acid	0.31
	Too stony	0.50	Restricted	0.31
	Restricted permeability	0.41	permeability	
	Too acid	0.08		
Stinnett-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too stony	0.50	Too acid	0.31
	Restricted permeability	0.41	Restricted permeability	0.31
	Too acid	0.08		
Wozny-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Low adsorption	1.00
	Leaching	0.70	Ponding	1.00
	Too stony	0.50	Too acid	0.31
	Too acid	0.08	Filtering capacity	0.01
856B: Stinnett-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too stony	0.50	Too acid	0.31
	Restricted permeability	0.41	Restricted permeability	0.31
	Too acid	0.08		
857B: Frogcreek-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Dense layer	1.00	Too acid	0.31
	Too stony	0.50	Restricted	0.31
	Restricted permeability	0.41	permeability	
	Too acid	0.08		

Table 22b.--Agricultural Waste Management--Continued

Map symbol and soil name	Application of manure and food- processing waste		Application of sewage sludge	
	Rating class and limiting features	Value	Rating class and limiting features	Value
857C: Frogcreek-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Dense layer	1.00	Too acid	0.31
	Too stony	0.50	Restricted	0.31
	Restricted permeability	0.41	permeability	
	Slope	0.16	Slope	0.16
873B: Stanberry-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Dense layer	1.00	Low adsorption	1.00
	Depth to saturated zone	0.99	Depth to saturated zone	0.99
	Too stony	0.50	Restricted	0.31
	Restricted permeability	0.41	permeability	
			Droughty	0.06
873C: Stanberry-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Dense layer	1.00	Low adsorption	1.00
	Depth to saturated zone	0.99	Depth to saturated zone	0.99
	Too stony	0.50	Slope	0.37
	Restricted permeability	0.41	Restricted	0.31
			permeability	
873D: Stanberry-----	Very limited		Very limited	
	Slope	1.00	Filtering	1.00
	Filtering capacity	1.00	capacity	
	Dense layer	1.00	Low adsorption	1.00
	Depth to saturated zone	0.99	Slope	1.00
	Too stony	0.50	Depth to saturated zone	0.99
			Restricted	0.31
			permeability	
905A: Cublake-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Dense layer	1.00	Depth to	0.86
	Depth to saturated zone	0.86	saturated zone	
	Too acid	0.22	Too acid	0.77
	Droughty	0.01	Droughty	0.01
926A: Flink-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too acid	0.22	Too acid	0.77

Table 22b.--Agricultural Waste Management--Continued

Map symbol and soil name	Application of manure and food- processing waste		Application of sewage sludge	
	Rating class and limiting features	Value	Rating class and limiting features	Value
943D:				
Stanberry-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Slope	1.00	Low adsorption	1.00
	Dense layer	1.00	Slope	1.00
	Depth to saturated zone	0.99	Depth to saturated zone	0.99
	Too stony	0.50	Restricted permeability	0.31
Greenwood-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Low adsorption	1.00
	Too acid	0.94	Too acid	1.00
	Leaching	0.90	Ponding	1.00
	Filtering capacity	0.01	Filtering capacity	0.01
948A:				
Billyboy-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Too acid	0.08	Too acid	0.31
970C:				
Keweenaw-----	Somewhat limited		Somewhat limited	
	Leaching	0.45	Too acid	0.77
	Slope	0.37	Slope	0.37
	Too acid	0.22	Filtering capacity	0.01
	Filtering capacity	0.01		
Pence-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Dense layer	1.00	Droughty	0.74
	Droughty	0.74	Slope	0.37
	Too stony	0.50	Too acid	0.31
	Slope	0.37		
Greenwood-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Low adsorption	1.00
	Too acid	0.94	Too acid	1.00
	Leaching	0.90	Ponding	1.00
970E:				
Keweenaw-----	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Leaching	0.45	Too acid	0.77
	Too acid	0.22	Filtering capacity	0.01
	Filtering capacity	0.01		

Table 22b.--Agricultural Waste Management--Continued

Map symbol and soil name	Application of manure and food- processing waste		Application of sewage sludge	
	Rating class and limiting features	Value	Rating class and limiting features	Value
970E:				
Pence-----	Very limited		Very limited	
	Slope	1.00	Filtering	1.00
	Filtering	1.00	capacity	
	capacity		Slope	1.00
	Dense layer	1.00	Droughty	0.74
	Droughty	0.74	Too acid	0.31
	Too stony	0.50		
Greenwood-----	Very limited		Very limited	
	Filtering	1.00	Filtering	1.00
	capacity		capacity	
	Depth to	1.00	Depth to	1.00
	saturated zone		saturated zone	
	Ponding	1.00	Low adsorption	1.00
	Too acid	0.94	Too acid	1.00
	Leaching	0.90	Ponding	1.00
1070C:				
Fremstadt-----	Somewhat limited		Somewhat limited	
	Leaching	0.45	Too acid	0.31
	Slope	0.16	Slope	0.16
	Too acid	0.08	Filtering	0.01
	Filtering	0.01	capacity	
	capacity			
Cress-----	Very limited		Very limited	
	Filtering	1.00	Filtering	1.00
	capacity		capacity	
	Droughty	0.60	Droughty	0.60
	Leaching	0.45	Too acid	0.31
	Too acid	0.08	Slope	0.04
	Slope	0.04		
1070D:				
Fremstadt-----	Very limited		Very limited	
	Slope	1.00	Slope	1.00
	Leaching	0.45	Too acid	0.31
	Too acid	0.08	Filtering	0.01
	Filtering	0.01	capacity	
	capacity			
Cress-----	Very limited		Very limited	
	Filtering	1.00	Filtering	1.00
	capacity		capacity	
	Slope	1.00	Slope	1.00
	Droughty	0.60	Droughty	0.60
	Leaching	0.45	Too acid	0.31
	Too acid	0.08		
1080B:				
Spoonerhill-----	Very limited		Very limited	
	Depth to	0.99	Depth to	0.99
	saturated zone		saturated zone	
	Leaching	0.45	Too acid	0.31
	Restricted	0.41	Restricted	0.31
	permeability		permeability	
	Too acid	0.08	Droughty	0.04
	Droughty	0.04	Filtering	0.01
			capacity	



Table 22b.--Agricultural Waste Management--Continued

Map symbol and soil name	Application of manure and food- processing waste		Application of sewage sludge	
	Rating class and limiting features	Value	Rating class and limiting features	Value
1080B: Spoonershill, stony--	Very limited		Very limited	
	Depth to saturated zone	0.99	Depth to saturated zone	0.99
	Leaching	0.45	Too acid	0.31
	Restricted permeability	0.41	Restricted permeability	0.31
	Too acid	0.08	Droughty	0.04
	Droughty	0.04	Filtering capacity	0.01
Cress-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Droughty	0.60	Droughty	0.60
	Leaching	0.45	Too acid	0.31
	Too acid	0.08		
1653C: Stanberry-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Dense layer	1.00	Low adsorption	1.00
	Depth to saturated zone	0.99	Depth to saturated zone	0.99
	Too stony	0.50	Restricted	0.31
	Restricted permeability	0.41	permeability	
			Droughty	0.06
Parkfalls-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Dense layer	1.00	Too acid	0.77
	Droughty	0.61	Droughty	0.61
	Too stony	0.50	Restricted	0.31
	Restricted permeability	0.41	permeability	
			Depth to dense material	0.20
Wozny-----	Very limited		Very limited	
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Low adsorption	1.00
	Leaching	0.70	Ponding	1.00
	Too stony	0.50	Too acid	0.31
	Too acid	0.08	Filtering capacity	0.01
2015: Pits-----	Not rated		Not rated	
2050: Landfill-----	Not rated		Not rated	

Table 22b.--Agricultural Waste Management--Continued

Map symbol and soil name	Application of manure and food- processing waste	Application of sewage sludge	
	Rating class and limiting features	Value	Rating class and limiting features
3011A: Barronett-----	Very limited		Very limited
	Depth to saturated zone	1.00	Depth to saturated zone
	Ponding	1.00	Ponding
	Leaching	0.70	Too acid
	Restricted permeability	0.41	Restricted permeability
	Too acid	0.08	
3125A: Meehan-----	Very limited		Very limited
	Filtering capacity	1.00	Filtering capacity
	Depth to saturated zone	1.00	Depth to saturated zone
	Droughty	0.94	Droughty
	Leaching	0.45	Too acid
	Too acid	0.27	
3126A: Wurtsmith-----	Very limited		Very limited
	Filtering capacity	1.00	Filtering capacity
	Depth to saturated zone	0.99	Too acid
	Droughty	0.85	Depth to saturated zone
	Too acid	0.78	Droughty
	Leaching	0.45	
3276A: Au Gres-----	Very limited		Very limited
	Filtering capacity	1.00	Filtering capacity
	Depth to saturated zone	1.00	Depth to saturated zone
	Droughty	0.29	Low adsorption
			Droughty
3312B: Glendenning, very stony-----	Very limited		Very limited
	Depth to saturated zone	1.00	Depth to saturated zone
	Too stony	0.50	Too acid
	Restricted permeability	0.41	Restricted permeability
	Too acid	0.08	
Glendenning-----	Very limited		Very limited
	Depth to saturated zone	1.00	Depth to saturated zone
	Restricted permeability	0.41	Too acid
	Too acid	0.08	Restricted permeability

Table 22b.--Agricultural Waste Management--Continued

Map symbol and soil name	Application of manure and food- processing waste	Application of sewage sludge		
	Rating class and limiting features	Value	Rating class and limiting features	Value
3336A: Fenander-----	Very limited Depth to saturated zone Ponding Leaching Restricted permeability	1.00 1.00 0.70 0.41	Very limited Depth to saturated zone Ponding Restricted permeability	1.00 1.00 0.31
3403A: Loxley-----	Very limited Filtering capacity Depth to saturated zone Ponding Too acid Leaching	1.00 1.00 1.00 0.94 0.90	Very limited Filtering capacity Depth to saturated zone Low adsorption Too acid Ponding	1.00 1.00 1.00 1.00 1.00
Beseman-----	Very limited Depth to saturated zone Ponding Too acid Leaching Restricted permeability	1.00 1.00 0.94 0.90 0.41	Very limited Depth to saturated zone Low adsorption Too acid Ponding Restricted permeability	1.00 1.00 1.00 1.00 0.31
Dawson-----	Very limited Filtering capacity Depth to saturated zone Ponding Too acid Leaching	1.00 1.00 1.00 0.94 0.90	Very limited Filtering capacity Depth to saturated zone Low adsorption Too acid Ponding	1.00 1.00 1.00 1.00 1.00
3424C: Frogcreek-----	Very limited Depth to saturated zone Dense layer Too stony Restricted permeability Too acid	1.00 1.00 0.50 0.41 0.08	Very limited Depth to saturated zone Too acid Restricted permeability	1.00 0.31 0.31
Magroc-----	Very limited Depth to saturated zone Too stony Too acid	1.00 0.50 0.08	Very limited Depth to saturated zone Low adsorption Too acid	1.00 1.00 0.31
Stinnett-----	Very limited Depth to saturated zone Too stony Restricted permeability Too acid	1.00 0.50 0.41 0.08	Very limited Depth to saturated zone Too acid Restricted permeability	1.00 0.31 0.31

Table 22b.--Agricultural Waste Management--Continued

Map symbol and soil name	Application of manure and food- processing waste		Application of sewage sludge	
	Rating class and limiting features	Value	Rating class and limiting features	Value
3424C: Rock outcrop-----	Not rated		Not rated	
3446A: Newson-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Depth to saturated zone	1.00	Depth to saturated zone	1.00
	Ponding	1.00	Low adsorption	1.00
	Too acid	0.62	Too acid	1.00
	Runoff	0.40	Ponding	1.00
3448B: Grettum-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Too acid	0.27	Too acid	0.85
	Droughty	0.02	Droughty	0.02
3448C: Grettum-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Too acid	0.27	Too acid	0.85
	Slope	0.04	Slope	0.04
	Droughty	0.02	Droughty	0.02
3516A: Slimlake-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Depth to saturated zone	0.86	Depth to saturated zone	0.86
	Too acid	0.11	Too acid	0.42
	Droughty	0.07	Droughty	0.07
3629B: Perida-----	Very limited		Very limited	
	Filtering capacity	1.00	Filtering capacity	1.00
	Restricted permeability	1.00	Restricted permeability	1.00
	Leaching	0.45	Too acid	0.85
	Too acid	0.27	Depth to saturated zone	0.09
	Depth to saturated zone	0.09		
M-W: Miscellaneous water	Not rated		Not rated	
W: Water-----	Not rated		Not rated	

# Soil Properties

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Data relating to soil properties are collected during the course of the soil survey.

Soil properties are ascertained by field examination of the soils and by laboratory index testing of some benchmark soils. Established standard procedures are followed. During the survey, many shallow borings are made and examined to identify and classify the soils and to delineate them on the soil maps. Samples are taken from some typical profiles and tested in the laboratory to determine particle-size distribution, plasticity, and compaction characteristics.

Estimates of soil properties are based on field examinations, on laboratory tests of samples from the survey area, and on laboratory tests of samples of similar soils in nearby areas. Tests verify field observations, verify properties that cannot be estimated accurately by field observation, and help to characterize key soils.

The estimates of soil properties are shown in tables. They include engineering index properties, physical and chemical properties, and pertinent soil and water features.

## Engineering Index Properties

Table 23 gives the engineering classifications and the range of index properties for the layers of each soil in the survey area.

*Depth* to the upper and lower boundaries of each layer is indicated.

*Texture* is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. "Loam," for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, "gravelly." Textural terms are defined in the Glossary.

*Classification* of the soils is determined according to the Unified soil classification system (ASTM, 2005) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 2004).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group

index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest.

*Rock fragments* larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage.

*Percentage (of soil particles) passing designated sieves* is the percentage of the soil fraction less than 3 inches in diameter based on an oven-dry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

*Liquid limit and plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination.

The estimates of particle-size distribution, liquid limit, and plasticity index are generally rounded to the nearest 5 percent. Thus, if the ranges of gradation and Atterberg limits extend a marginal amount (1 or 2 percentage points) across classification boundaries, the classification in the marginal zone is generally omitted in the table.

## Physical Properties

Table 24 shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

*Depth* to the upper and lower boundaries of each layer is indicated.

*Clay* as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In table 24, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

*Moist bulk density* is the weight of soil (oven-dry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at  $1/3$ - or  $1/10$ -bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

*Permeability* refers to the ability of a soil to transmit water or air. The term "permeability," as used in soil surveys, indicates saturated hydraulic conductivity ( $K_{sat}$ ). The estimates in the table indicate the rate of water movement, in inches per hour, when the soil is saturated. They are based on soil characteristics observed in the field,

particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems and septic tank absorption fields.

*Available water capacity* refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

*Linear extensibility* refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at  $1/3$ - or  $1/10$ -bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. Volume change is influenced by the amount and type of clay minerals in the soil.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

*Organic matter* is the plant and animal residue in the soil at various stages of decomposition. In table 24, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained by returning crop residue to the soil. Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops and soil organisms.

*Erosion factors* are shown in table 24 as the K factor ( $K_w$  and  $K_f$ ) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of several factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and permeability. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

*Erosion factor  $K_w$*  indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

*Erosion factor  $K_f$*  indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

*Erosion factor T* is an estimate of the maximum average annual rate of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

*Wind erodibility groups* are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are described in the "National Soil Survey Handbook" (USDA, NRCS).

*Wind erodibility index* is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer,

the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

## Chemical Properties

Table 25 shows estimates of some chemical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

*Depth* to the upper and lower boundaries of each layer is indicated.

*Cation-exchange capacity* is the total amount of extractable bases that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. Soils having a low cation-exchange capacity hold fewer cations and may require more frequent applications of fertilizer than soils having a high cation-exchange capacity. The ability to retain cations reduces the hazard of ground-water pollution.

*Effective cation-exchange capacity* refers to the sum of extractable bases plus aluminum expressed in terms of milliequivalents per 100 grams of soil. It is determined for soils that have pH of less than 5.5.

*Soil reaction* is a measure of acidity or alkalinity. The pH of each soil horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

*Calcium carbonate* equivalent is the percent of carbonates, by weight, in the fraction of the soil less than 2 millimeters in size. The availability of plant nutrients is influenced by the amount of carbonates in the soil. Incorporating nitrogen fertilizer into calcareous soils helps to prevent nitrite accumulation and ammonium-N volatilization.

## Water Features

*Soil moisture status* is an estimate of the fluctuating water content in a soil. It greatly influences vegetation type and plant growth; physical properties of soils, such as permeability, workability, strength, linear extensibility, and frost action; and chemical interactions and transport. Many other properties, qualities, and interpretations also are affected. Soil moisture status is important in the classification of soils, wetland, and habitat.

Table 26 gives estimates of soil moisture for each component of a map unit at various depths for every month of the year. The depths displayed are representative values that are indicative of conditions that occur most commonly. *Dry* indicates a moisture condition under which most plants (especially crops) cannot extract water for growth. *Moist* indicates a moisture condition under which soil water is most readily available for plant growth. *Wet* indicates a condition under which water will stand in an unlined hole or at least a condition under which the soil is too wet for the growth of most agricultural species. A moisture status of 4.0-6.7 (wet) indicates that most of the time the component is saturated at some depth between 4.0 feet and 6.7 feet during the month designated. In some years the soil may be saturated at a depth of less than 4.0 feet or more than 6.7 feet; however, field observations indicate that the soil will be saturated between these depths in most years. In the summer, the soil may show the effects of drying plus intermittent rains that result in a moist or wet layer over a dry layer that gets moist or wet again.

In table 26, *hydrologic soil groups* are groups of soils that, when saturated, have the same runoff potential under similar storm and ground cover conditions. The soil properties that affect the runoff potential are those that influence the minimum rate of infiltration in a bare soil after prolonged wetting and when the soil is not frozen. These



properties include the depth to a zone in which the soil moisture status is wet, the infiltration rate, permeability after prolonged wetting, and the depth to a very slowly permeable horizon or horizons. The influences of ground cover and slope are treated independently and are not taken into account in hydrologic soil groups.

In the definitions of the hydrologic soil groups, the infiltration rate is the rate at which water enters the soil at the surface and is controlled by surface conditions. The transmission rate is the rate at which water moves through the soil and is controlled by properties of the soil horizons.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist chiefly of very deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have a moderately fine to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a horizon or horizons that impede the downward movement of water or soils that have a moderately fine or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clayey soils that have a high linear extensibility; soils that have a zone, high in the profile, in which the soil moisture status is wet on a permanent basis; soils that have a claypan or clay horizon or horizons at or near the surface; and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

*Flooding*, the temporary covering of the soil surface by flowing water, is caused by overflow from streams or by runoff from adjacent slopes. Shallow water standing or flowing for short periods after rainfall or snowmelt is not considered flooding. Standing water in marshes and swamps or in closed depressions is considered to be ponding.

Table 27 gives estimates of the frequency and duration of flooding for every month of the year. Flooding frequency is the annual probability of a flood event expressed as a class. *None* indicates no reasonable possibility of flooding (the chance of flooding is nearly 0 percent in any year, or flooding is likely less than once in 500 years). *Very rare* indicates that flooding is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year, or flooding is likely less than once in 100 years but more than once in 500 years). *Rare* indicates that flooding is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year, or flooding is likely 1 to 5 times in 100 years). *Occasional* indicates that flooding occurs infrequently under usual weather conditions (the chance of flooding is 5 to 50 percent in any year, or flooding is likely 5 to 50 times in 100 years). *Frequent* indicates that flooding is likely to occur often under usual weather conditions (the chance of flooding is more than 50 percent in any year, or flooding is likely more than 50 times in 100 years; but the chance of flooding is less than 50 percent in all months in any year). *Very frequent* indicates that flooding is likely to occur very often under usual weather conditions (the chance of flooding is more than 50 percent in all months of any year).

Flooding duration is the average duration of inundation per flood occurrence expressed as a class. *Extremely brief* is 0.1 hour to 4.0 hours; *very brief* is 4 to 48 hours; *brief* is 2 to 7 days; *long* is 7 to 30 days; and *very long* is more than 30 days. About two-thirds to three-fourths of all flooding occurs during the stated period.

The information on flooding is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and level of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

*Ponding* is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation.

Table 28 gives estimates of the frequency, duration, and depth of ponding for every month of the year. The depths displayed are representative values that are indicative of conditions that occur most of the time.

Ponding frequency is the number of times ponding occurs over a period of time. *None* indicates no reasonable possibility of ponding (the chance of ponding is nearly 0 percent in any year). *Rare* indicates that ponding is unlikely but possible under unusual weather conditions (the chance of ponding ranges from nearly 0 percent to 5 percent in any year, or ponding is likely 0 to 5 times in 100 years). *Occasional* indicates that ponding is expected infrequently under usual weather conditions (the chance of ponding ranges from 5 to 50 percent in any one year, or ponding is likely 5 to 50 times in 100 years). *Frequent* indicates that ponding is likely to occur under usual weather conditions (the chance of ponding is more than 50 percent in any year, or ponding is likely more than 50 times in 100 years).

Ponding duration is the average length of time of the ponding occurrence. It is expressed as *very brief* (less than 2 days), *brief* (2 to 7 days), *long* (7 to 30 days), and *very long* (more than 30 days).

## Soil Features

Table 29 gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

A *restrictive layer* is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers. *Depth to top* is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

*Subsidence* is the settlement of organic soils or of saturated mineral soils of very low density. Subsidence generally results from either desiccation and shrinkage or oxidation of organic material, or both, following drainage. Subsidence takes place gradually, usually over a period of several years. The table shows the expected initial subsidence, which usually is a result of drainage, and total subsidence, which results from a combination of factors.

*Potential for frost action* is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, permeability, content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a zone of saturation close to the surface in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

*Risk of corrosion* pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low*, *moderate*, or *high*, is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as *low*, *moderate*, or *high*. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

Table 23.--Engineering Index Properties

(Absence of an entry indicates that data were not estimated)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments			Percentage pass sieve number-			
					>10 inches		3-10 inches	4			
			Unified	AASHTO	Pct	Pct		10	40	100	200
3A: Totagatic-----	In										
	0-4	Muck	PT	A-8	0	0	0	100	100	100	---
	4-8	Loamy fine sand, loamy sand, fine sand, sand	SM	A-2	0	0	0	100	100	100	50-80
	8-17	Fine sand, sand, loamy sand, loamy sand, loamy fine sand	SM	A-2	0	0	0	100	100	100	50-80
	17-28	Fine sand, sand, loamy sand, coarse sand, mucky sand	SM	A-2, A-3	0	0	0	100	100	100	50-80
	28-46	Sand, fine sand, loamy sand, coarse sand, mucky sand	SM	A-2, A-3	0	0	0	100	100	100	50-80
	46-70	Sand, coarse sand, loamy sand, fine sand, loamy fine sand	SM	A-2, A-3	0	0	0	100	100	100	50-80
	70-80	Sand, coarse sand, fine sand, loamy sand, loamy fine sand	SM	A-2, A-3	0	0	0	100	100	100	50-80
	0-38	Muck	PT	A-8	0	0	0	100	100	100	---
	38-47	Fine sand, sand, loamy sand	SM, SP-SM	A-2	0	0	0	100	100	100	85-95
	47-80	Muck	PT	A-8	0	0	0	100	100	100	---
	0-10	Muck	PT	A-8	0	0	0	100	100	100	---
Ausable-----	10-60	Sand	SM	A-2-4, A-3	0	0	0	90-100	85-100	55-75	---

Table 23.---Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass-			
			Unified	AASHTO	>10 inches	3-10 inches	sieve number-			
							4	10	40	
22A: Comstock-----	In				Pct	Pct				
	0-8	Silt loam	ML, CL-ML, CL	A-4, A-6	0	0	0	98-100	95-100	90-10
	8-15	Silt loam	CL, CL-ML	A-4	0	0	0	98-100	95-100	90-10
	15-21	Silt loam, silty clay loam	CL	A-6	0	0	0	98-100	95-100	90-10
	21-34	Silt loam, silty clay loam	CL	A-6	0	0	0	98-100	95-100	90-10
	34-44	Stratified silt loam to very fine sand	CL-ML, CL	A-4	0	0	0	98-100	95-100	85-10
24A: Poskin-----	44-60	Stratified silt loam to very fine sand	CL-ML, CL	A-4	0	0	0	98-100	95-100	85-10
	0-9	Silt loam	CL-ML, CL	A-4	0	0-7	95-100	90-100	80-10	
	9-12	Silt loam	CL-ML	A-4	0	0-7	95-100	90-100	80-10	
	12-19	Silt loam	CL	A-4, A-6	0	0-7	95-100	90-100	80-10	
	19-36	Silt loam	CL	A-4, A-6	0	0-7	95-100	90-100	80-10	
	36-39	Sandy loam, loam, gravelly fine sandy loam, very gravelly sandy clay loam	SM, ML, CL-ML, SC-SM	A-1, A-2, A-4	0	0-7	50-100	45-100	30-10	
27A: Scott Lake-----	39-60	Stratified sand to very gravelly coarse sand	SP-SM, SP, GP-GM, GP	A-1, A-2, A-3	0	0-7	45-100	40-95	15-65	
	0-10	Sandy loam	SM, SC	A-2-4, A-4	0	0-7	80-100	75-100	50-80	
	10-17	Sandy loam	SC, SM	A-2-4, A-4	0	0-7	75-100	75-100	50-80	
	17-24	Sandy loam	SC, SM	A-2-4, A-4	0	0-7	75-100	75-100	50-80	
	24-31	Gravelly loamy sand, loamy sand, very gravelly loamy coarse sand	SM, GM	A-1-a, A-2-4, A-3	0	0-25	30-100	25-100	15-80	
	31-80	Stratified sand to very gravelly coarse sand	GP, GP-GM, SP, SP-SM	A-1, A-2, A-3	0	0-9	30-100	25-95	15-65	

Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments			Percentage pass sieve number-		
			Unified	AASHTO	>10	3-10	4	10	40	
					inches					
28B: Haugen, very stony-----	In					Pct	Pct			
	0-4	Sandy loam	SM, SC-SM	A-2-4, A-4	0-5	0-7	85-100	75-98	50-70	
	4-15	Sandy loam, gravelly sandy loam, fine	SM, SC-SM	A-1, A-2, A-4	0-5	0-7	55-100	50-90	35-85	
		loam, fine								
		sandy loam, gravelly loam								
	15-23	Gravelly sandy loam, sandy loam, fine	SM, SC-SM	A-1, A-2, A-4	0-5	0-7	55-100	50-90	35-75	
		sandy loam, gravelly loam								
	23-35	Gravelly sandy loam, sandy loam, gravelly fine sandy loam	SM, SC-SM	A-1, A-2, A-4	0-5	0-7	55-100	50-90	35-75	
	35-49	Sandy loam, gravelly sandy loam, fine	SC, SM	A-2, A-4, A-1	0-5	0-7	55-100	50-90	35-75	
		sandy loam								
	49-79	Gravelly sandy loam, sandy loam, fine	SC, SC-SM	A-1, A-2	0-5	0-7	55-100	50-90	35-75	
		sandy loam								
	79-80	Gravelly sandy loam, sandy loam, fine sandy loam	SC, SC-SM, SM	A-1, A-2, A-4	0-5	0-7	55-100	50-90	35-75	



Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass- sieve number-			
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	
In					Pct	Pct				
28B: Rosholt, very stony-----	0-4	Sandy loam	SM	A-2, A-4	1-5	0-3	80-100	75-100	50-75	
	4-10	Sandy loam, fine sandy loam, gravelly loamy sand	SC-SM, SM	A-1, A-2, A-4	0	0-3	55-100	50-100	35-75	
	10-14	Sandy loam, fine sandy loam, gravelly	SC-SM, SM	A-1, A-2, A-4	0	0-3	55-100	50-100	35-75	
	14-28	Sandy loam, fine sandy loam, gravelly loam	SC, SM	A-1, A-2, A-4	0	0-3	55-100	50-100	35-80	
	28-34	Gravelly loamy sand, very gravelly coarse sand, sand	GM, SP-SM, SM, GP-GM	A-1, A-2, A-3	0	0-25	30-100	25-100	20-80	
	34-60	Stratified sand to very gravelly coarse sand	GP, SP, SP-SM, GP-GM	A-1, A-2, A-3	0	0-25	30-100	25-95	15-65	
	0-8	Sandy loam	SM	A-2, A-4	0	0-3	80-100	75-100	50-75	
	8-10	Sandy loam, fine sandy loam, gravelly loamy sand	SM, SC-SM	A-1, A-2, A-4	0	0-3	55-100	50-100	35-75	
	10-14	Sandy loam, fine sandy loam, gravelly	SM, SC-SM	A-1, A-2, A-4	0	0-3	55-100	50-100	35-75	
	14-28	Sandy loam, fine sandy loam, gravelly loamy sand	SM, SC	A-1, A-2, A-4	0	0-3	55-100	50-100	35-80	
28-34	Gravelly loamy sand, very gravelly coarse sand, sand	SP-SM, GM, GP-GM, SM	A-1, A-2, A-3	0	0-25	30-100	25-100	20-80		
34-60	Stratified sand to very gravelly coarse sand	SP, GP-GM, GP, SP-SM	A-1, A-2, A-3	0	0-25	30-100	25-100	15-65		



Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments			Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	Pct	4	10	40
28C: Haugen, very stony-----	In						Pct			
	0-4	Sandy loam	SM, SC-SM	A-2-4, A-4	0-5	0-7		85-100	75-98	50-70
	4-15	Sandy loam, gravelly sandy loam, fine	SM, SC-SM	A-1, A-2, A-4	0-5	0-7		55-100	50-90	35-85
		loam, fine								
		sandy loam, gravelly loam								
	15-23	Gravelly sandy loam, sandy loam, fine	SC-SM, SM	A-1, A-2, A-4	0-5	0-7		55-100	50-90	35-75
		sandy loam, gravelly loam								
	23-35	Gravelly sandy loam, sandy loam, gravelly fine sandy loam	SM, SC-SM	A-1, A-2, A-4	0-5	0-7		55-100	50-90	35-75
	35-49	Sandy loam, gravelly sandy loam, fine	SC, SM	A-2, A-4, A-1	0-5	0-7		55-100	50-90	35-75
		sandy loam								
	49-79	Gravelly sandy loam, sandy loam, fine	SC, SC-SM	A-1, A-2	0-5	0-7		55-100	50-90	35-75
		sandy loam								
	79-80	Gravelly sandy loam, sandy loam, fine sandy loam	SC, SC-SM, SM	A-1, A-2, A-4	0-5	0-7		55-100	50-90	35-75













Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass-					
			Unified	AASHTO	>10	Pct	inches	Pct	4	10	40	
					inches							
43B:	In					Pct						
Antigo-----	0-9	Silt loam	ML, CL-ML	A-4		0	0-7			90-100	85-100	70-100
	9-12	Silt loam	ML, CL-ML	A-4		0	0-7			90-100	85-100	70-100
	12-19	Silt loam	CL-ML, CL	A-4		0	0-7			90-100	85-100	70-100
	19-28	Silt loam	CL, CL-ML	A-4		0	0-7			90-100	85-100	70-100
	28-31	Loam, sandy loam, fine sandy loam, gravelly loam, gravelly sandy loam, very gravelly fine sandy loam	CL-ML, SM, ML, SC-SM	A-1, A-2, A-4		0	0-7			50-100	45-100	35-85
	31-33	Very gravelly sandy loam, loam, fine sandy loam, gravelly loam, gravelly sandy loam, sandy loam	SC-SM, SM, ML	A-1, A-2, A-4		0	0-7			50-100	45-100	35-85
	33-60	Stratified sand to very gravelly coarse sand	GP-GM, GP, SP-SM, SP	A-1, A-2, A-3		0	0-7			45-100	40-95	15-65



Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments			Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	100
43C: Antigo-----	In				Pct	Pct				
	0-9	Silt loam	CL-ML, ML	A-4	0	0-7		90-100	85-100	70-100
	9-12	Silt loam	ML, CL-ML	A-4	0	0-7		90-100	85-100	70-100
	12-19	Silt loam	CL, CL-ML	A-4	0	0-7		90-100	85-100	70-100
	19-28	Silt loam	CL-ML, CL	A-4	0	0-7		90-100	85-100	70-100
	28-31	Loam, sandy	SM, ML, A-1, A-2, A-4		0	0-7		50-100	45-100	35-85
		loam, fine	SC-SM, CL-ML							
		sandy loam,								
		gravelly loam,								
		gravelly sandy								
		loam, very								
		gravelly fine								
		sandy loam								
	31-33	Very gravelly	SM, ML, SC-SM	A-1, A-2, A-4	0	0-7		50-100	45-100	35-85
		sandy loam,								
		loam, fine								
		sandy loam,								
		gravelly loam,								
		gravelly sandy								
		loam, sandy								
		loam								
	33-60	Stratified sand	SP-SM, SP, GP-GM, GP	A-1, A-2, A-3	0	0-7		45-100	40-95	15-65
		to very								
		gravelly								
		coarse sand								



Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
63A: Crystal Lake----	In				Pct	Pct			
	0-8	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	98-100	95-100	90-100
	8-12	Silt loam	CL, ML, CL-ML	A-4, A-6	0	0	98-100	95-100	90-100
	12-20	Silt loam, silty clay	CL, CL-ML	A-4, A-6	0	0	98-100	95-100	90-100
		loam							
	20-32	Silt loam, silty clay	CL	A-6, A-4	0	0	98-100	95-100	90-100
63B: Crystal Lake----		loam							
	32-60	Stratified silt loam to very fine sand	CL, ML, CL-ML	A-4	0	0	98-100	95-100	85-100
	0-8	Silt loam	ML, CL-ML, CL	A-4, A-6	0	0	98-100	95-100	90-100
	8-12	Silt loam	ML, CL, CL-ML	A-4, A-6	0	0	98-100	95-100	90-100
	12-20	Silt loam, silty clay	CL-ML, CL	A-4, A-6	0	0	98-100	95-100	90-100
63C: Crystal Lake----		loam							
	20-32	Silt loam, silty clay	CL	A-6, A-4	0	0	98-100	95-100	90-100
		loam							
	32-60	Stratified silt loam to very fine sand	CL, CL-ML, ML	A-4	0	0	98-100	95-100	85-100
	0-8	Silt loam	ML, CL-ML, CL	A-4, A-6	0	0	98-100	95-100	90-100
63C: Crystal Lake----	8-12	Silt loam	CL-ML, CL, ML	A-4, A-6	0	0	98-100	95-100	90-100
	12-20	Silt loam, silty clay	CL-ML, CL	A-4, A-6	0	0	98-100	95-100	90-100
		loam							
	20-32	Silt loam, silty clay	CL	A-4, A-6	0	0	98-100	95-100	90-100
		loam							
	32-60	Stratified silt loam to very fine sand	ML, CL, CL-ML	A-4	0	0	98-100	95-100	85-100





Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches			
							4	10	40
69B: Sayner-----	In				Pct	Pct			
	0-2	Loamy sand	SM	A-1	0-2	0-15	85-100	75-100	45-75
	2-4	Loamy sand, sand	SP-SM, SM	A-1	0	0-15	85-100	75-100	40-75
	4-7	Loamy sand, sand, gravelly coarse sand, loamy coarse sand	SM, SP-SM	A-1, A-3	0	0-15	70-100	50-100	25-75
	7-14	Sand, loamy sand, gravelly sand, loamy coarse sand	SP-SM, SM	A-1, A-3	0	0-15	70-100	50-100	25-75
	14-22	Gravelly sand, loamy sand, coarse sand, loamy coarse sand	SP-SM, SM, SP	A-1, A-3	0	0-15	70-100	50-100	25-75
Vilas-----	22-60	Stratified sand to very gravelly coarse sand	SP, SP-SM	A-1	0	0-15	60-85	40-85	25-45
	0-2	Loamy sand	SM	A-1-b, A-2-4	0-2	0	80-100	75-100	30-75
	2-4	Loamy sand	SP-SM, SM	A-1-b, A-2-4, A-3	0	0	80-100	75-100	30-75
	4-11	Loamy sand	SM	A-1-b, A-2-4	0	0	80-100	75-100	30-75
	11-23	Sand, loamy sand	SM, SP-SM	A-1-b, A-2-4, A-3	0	0	80-100	75-100	20-75
	23-32	Sand	SP-SM, SM	A-1-b, A-2-4, A-3	0	0	80-100	75-100	20-70
			SM, SP-SM	A-1-b, A-2-4, A-3	0	0	80-100	75-100	20-70
	32-80	Sand							



Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass-			
			Unified	AASHTO	>10	3-10	sieve number-			
					inches	inches	4	10	40	
69C: Sayer-----	In				Pct	Pct				
	0-2	Loamy sand	SM	A-1	0-2	0-15	85-100	75-100	45-75	
	2-4	Loamy sand, sand	SP-SM, SM	A-1	0	0-15	85-100	75-100	40-75	
	4-7	Loamy sand, sand, gravelly coarse sand, loamy coarse sand	SP-SM, SM	A-1, A-3	0	0-15	70-100	50-100	25-75	
	7-14	Sand, loamy sand, gravelly sand, loamy coarse sand	SM, SP-SM	A-1, A-3	0	0-15	70-100	50-100	25-75	
Vilas-----	14-22	Gravelly sand, loamy sand, coarse sand, loamy coarse sand	SP-SM, SP, SM	A-1, A-3	0	0-15	70-100	50-100	25-75	
	22-60	Stratified sand to very gravelly coarse sand	SP, SP-SM	A-1	0	0-15	60-85	40-85	25-45	
	0-2	Loamy sand	SM	A-1-b, A-2-4	0-2	0	80-100	75-100	30-75	
	2-4	Loamy sand	SP-SM, SM	A-1-b, A-2-4, A-3	0	0	80-100	75-100	30-75	
	4-11	Loamy sand	SM	A-1-b, A-2-4	0	0	80-100	75-100	30-75	
	11-23	Sand, loamy sand	SP-SM, SM	A-1-b, A-2-4, A-3	0	0	80-100	75-100	20-75	
	23-32	Sand	SM, SP-SM	A-1-b, A-2-4, A-3	0	0	80-100	75-100	20-70	
	32-80	Sand	SM, SP-SM	A-1-b, A-2-4, A-3	0	0	80-100	75-100	20-70	





Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass-		
			Unified	AASHTO	>10 inches	3-10 inches	sieve number-		
							4	10	40
69E: Sayner-----	In					Pct			
	0-2	Loamy sand	SM	A-1	0-2	0-15	85-100	75-100	45-75
	2-4	Loamy sand, sand	SP-SM, SM	A-1	0	0-15	85-100	75-100	40-75
	4-7	Loamy sand, sand, gravelly sand, gravelly coarse sand, loamy coarse sand	SM, SP-SM	A-1, A-3	0	0-15	70-100	50-100	25-75
	7-14	Sand, loamy sand, gravelly sand, loamy coarse sand	SM, SP-SM	A-1, A-3	0	0-15	70-100	50-100	25-75
	14-22	Gravelly sand, loamy sand, coarse sand, loamy coarse sand	SM, SP, SP-SM	A-1, A-3	0	0-15	70-100	50-100	25-75
	22-60	Stratified sand to very gravelly coarse sand	SP, SP-SM	A-1	0	0-15	60-85	40-85	25-45
Villas-----	0-2	Loamy sand	SM	A-1-b, A-2-4	0-2	0	80-100	75-100	30-75
	2-4	Loamy sand	SM, SP-SM	A-1-b, A-2-4, A-3	0	0	80-100	75-100	30-75
	4-11	Loamy sand	SM	A-1-b, A-2-4	0	0	80-100	75-100	30-75
	11-23	Sand, loamy sand	SM, SP-SM	A-1-b, A-2-4, A-3	0	0	80-100	75-100	20-75
	23-32	Sand	SM, SP-SM	A-1-b, A-2-4, A-3	0	0	80-100	75-100	20-70
	32-80	Sand	SM, SP-SM	A-1-b, A-2-4, A-3	0	0	80-100	75-100	20-70
74B: Villas-----	0-2	Loamy sand	SM	A-1-b, A-2-4	0	0	80-100	75-100	30-75
	2-4	Loamy sand	SM, SP-SM	A-1-b, A-2-4, A-3	0	0	80-100	75-100	30-75
	4-11	Loamy sand	SM	A-1-b, A-2-4	0	0	80-100	75-100	30-75
	11-23	Sand, loamy sand	SM, SP-SM	A-1-b, A-2-4, A-3	0	0	80-100	75-100	20-75
	23-32	Sand	SP-SM, SM	A-1-b, A-2-4, A-3	0	0	80-100	75-100	20-70
	32-80	Sand	SP-SM, SM	A-1-b, A-2-4, A-3	0	0	80-100	75-100	20-70

Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
74C: Vilas-----	In				Pct	Pct			
	0-2	Loamy sand	SM	A-1-b, A-2-4	0	0	80-100	75-100	30-75
	2-4	Loamy sand	SP-SM, SM	A-1-b, A-2-4, A-3	0	0	80-100	75-100	30-75
	4-11	Loamy sand	SM	A-1-b, A-2-4	0	0	80-100	75-100	30-75
	11-23	Sand, loamy sand	SP-SM, SM	A-1-b, A-2-4, A-3	0	0	80-100	75-100	20-75
	23-32	Sand	SM, SP-SM	A-1-b, A-2-4, A-3	0	0	80-100	75-100	20-70
74D: Vilas-----	32-80	Sand	SM, SP-SM	A-1-b, A-2-4, A-3	0	0	80-100	75-100	20-70
	0-2	Loamy sand	SM	A-1-b, A-2-4	0	0	80-100	75-100	30-75
	2-4	Loamy sand	SP-SM, SM	A-1-b, A-2-4, A-3	0	0	80-100	75-100	30-75
	4-11	Loamy sand	SM	A-1-b, A-2-4	0	0	80-100	75-100	30-75
	11-23	Sand, loamy sand	SM, SP-SM	A-1-b, A-2-4, A-3	0	0	80-100	75-100	20-75
	23-32	Sand	SP-SM, SM	A-1-b, A-2-4, A-3	0	0	80-100	75-100	20-70
100B: Menahga-----	32-80	Sand	SM, SP-SM	A-1-b, A-2-4, A-3	0	0	80-100	75-100	20-70
	0-2	Sand	SM	A-2, A-3	0	0	95-100	85-100	55-70
	2-25	Sand, loamy sand	SM	A-2, A-3	0	0	95-100	85-100	55-75
	25-80	Sand, coarse sand	SM	A-2, A-3	0	0	95-100	85-100	55-70
	0-1	Slightly decomposed plant material	PT	A-8	0	0	100	100	---
100C: Menahga-----									
	1-2	Sand	SM	A-2, A-3	0	0	95-100	85-100	55-70
	2-25	Sand, loamy sand	SM	A-2, A-3	0	0	95-100	85-100	55-75
	25-80	Sand, coarse sand	SM	A-2, A-3	0	0	95-100	85-100	55-70

Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-					
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40			
100D: Menahga-----	In											
	0-1	Slightly decomposed plant material	PT	A-8	0	0	0	100	100	---		
	1-2	Sand	SM	A-2, A-3	0	0		95-100	85-100	55-70	55-70	
	2-25	Sand, loamy sand	SM	A-2, A-3	0	0		95-100	85-100	55-75	55-75	
	25-80	Sand, coarse sand	SM	A-2, A-3	0	0		95-100	85-100	55-70	55-70	
127D: Amery-----	0-3	Sandy loam	SC-SM, SM	A-2-4, A-4	0-5	0-7	85-100	75-98	50-75	50-75		
	3-22	Sandy loam, loam, gravelly loam, gravelly	SC-SM, SM	A-2-4, A-4	0-5	0-7	55-100	50-90	50-75	50-75		
	22-34	Sandy loam, fine sandy loam, gravelly	SM, SC-SM	A-1-b, A-2-4, A-4	0-5	0-7	55-100	50-90	35-75	35-75		
	34-41	Gravelly sandy loam, fine sandy loam, sandy loam	SC-SM, SM	A-1-b, A-2-4, A-4	0-5	0-7	55-100	50-90	35-75	35-75		
	41-57	Gravelly sandy loam, fine sandy loam, sandy loam	SC, SM	A-2-4, A-4, A-1-b	0-5	0-7	55-100	50-90	35-75	35-75		
71-80	57-71	Sandy loam, fine sandy loam, gravelly	SC, SM	A-2-4, A-4, A-1-b	0-5	0-7	55-100	50-90	35-75	35-75		
		Sandy loam										
		Sandy loam, fine sandy loam, gravelly sandy loam	SC-SM, SM	A-1-b, A-2-4, A-4	0-5	0-7	55-100	50-90	35-75	35-75		













Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass- sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches			
							4	10	40
160A: Oosterle-----	In				Pct	Pct			
	0-7	Sandy loam	SC, SM, SC-SM	A-2, A-4	0	0-9	85-100	80-100	55-80
	7-11	Sandy loam, loam, gravelly fine sandy loam	SM, SC	A-2, A-4	0	0-9	75-100	70-100	50-80
	11-31	Sandy loam, gravelly loam, fine sandy loam	SC, SM	A-1, A-2, A-4	0	0-9	55-100	50-100	35-75
	31-60	Stratified sand to very gravelly coarse sand	GP, SP-SM, SP, GP-GM	A-1, A-2, A-3	0	0-9	30-100	25-95	15-65
182B: Padus-----	0-2	Sandy loam	SM	A-1-b, A-2, A-4	0	0-7	80-100	75-100	30-90
	2-3	Sandy loam, fine sandy loam, loam	SM, SC-SM	A-1-b, A-2, A-4	0	0-7	80-100	75-100	30-90
	3-19	Sandy loam, loam, fine sandy loam	SC, SC-SM, SM	A-1-b, A-2, A-4	0	0-7	80-100	75-100	30-90
	19-26	Sandy loam, gravelly loam, fine sandy loam	SC-SM, SC, SM	A-1, A-2, A-4	0	0-7	55-100	50-100	30-90
	26-38	Sandy loam, gravelly loam, fine sandy loam	SC-SM, SM, CL-ML, SC	A-1, A-2, A-4	0	0-7	55-100	50-100	30-90
38-60	Stratified sand to very gravelly coarse sand	GP-GM, SP-SM, SP, GP	A-1, A-2, A-3	0	0-15	45-100	40-95	15-65	



Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass-		
			Unified	AASHTO	>10 inches	3-10 inches	sieve number-		
							4	10	40
192A: Worcester-----	In				Pct	Pct			
	0-2	Sandy loam	SM	A-2-4, A-4	0	0-7	80-100	75-100	45-90
	2-3	Sandy loam, loam, gravelly fine sandy loam	SM, SC-SM	A-1-b, A-2-4, A-4	0	0-7	55-100	50-100	35-95
	3-6	Sandy loam, loam, gravelly fine sandy loam	SM, SC-SM, SC	A-1-b, A-2-4, A-4	0	0-7	55-100	50-100	35-95
	6-16	Sandy loam, loam, gravelly fine sandy loam	SC, SC-SM, SM	A-1-b, A-2-4, A-4	0	0-7	55-100	50-100	35-95
	16-20	Sandy loam, loamy sand, gravelly loam	SC, CL-ML, SM, SC-SM	A-1-b, A-2-4, A-4	0	0-7	55-100	50-100	35-95
	20-32	Sandy loam, fine sandy loam, gravelly loam	SM, SC, SC-SM, CL-M	A-1-b, A-2-4, A-4	0	0-7	55-100	50-100	35-95
	32-39	Gravelly loamy sand, very gravelly coarse sand	GM, SM	A-1-a, A-2-4, A-3	0	0-7	45-100	40-95	20-70
	39-60	Stratified sand to very gravelly coarse sand	SP-SM, SP, GP-GM, GP	A-1, A-2, A-3	0	0-7	45-100	40-95	15-65
	193A: Minocqua-----	0-4	Muck	PT	A-8	0	0	100	100
4-15		Silt loam, loam, sandy loam, fine sandy loam, very fine sandy loam	ML, CL, SC, SM	A-2, A-4	0	0-7	80-100	75-100	45-10
15-28		Loam, gravelly sandy loam, fine sandy loam	ML, SC, CL, SM	A-1, A-2, A-4	0	0-7	55-100	50-100	30-95
28-60		Stratified sand to very gravelly coarse sand	GP, SP, GP-GM, SP-SM	A-1, A-2, A-3	0	0-7	45-100	40-95	15-65



Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-			
			Unified	AASHTO	>10 inches	3-10 inches	Pct			
							Pct	Pct	Pct	
215D: Pence-----	In									
	0-3	Sandy loam	SM	A-4	0	0-15	80-100	75-100	50-85	
	3-8	Sandy loam, loam, fine loam, fine sandy loam, loamy sand	SC-SM, SM	A-2-4, A-4	0	0-15	80-100	75-100	45-95	
	8-15	Gravelly sandy loam, sandy loam, loam, fine sandy loam	SC-SM, SM	A-1-b, A-2-4, A-4	0	0-15	55-100	50-100	30-95	
	15-21	Gravelly coarse sand, loamy sand, sand, loamy fine sand	SP-SM, SM, GM, GP-GM	A-1-b, A-3	0	0-15	45-100	40-95	20-70	
315A: Rib-----	21-60	Stratified sand to very gravelly coarse sand	GP, GP-GM, SP, SP-SM	A-1, A-2, A-3	0	0-15	45-100	40-95	15-65	
	0-7	Silt loam	CL-ML, CL	A-4, A-6	0	0-7	95-100	90-100	90-100	
	7-10	Silt loam	CL-ML	A-4	0	0-7	95-100	90-100	90-100	
	10-32	Silt loam, silty clay loam	CL	A-6	0	0-7	95-100	90-100	90-100	
	32-35	Loam, gravelly loam, sandy loam	SC, SM, CL, ML	A-1, A-2, A-4, A-6	0	0-7	55-100	45-100	35-90	
	35-37	Gravelly loamy sand, loamy sand, loamy coarse sand, very gravelly loamy coarse sand	SP-SM, GM, SM, GP-GM	A-1-b, A-3	0	0-7	30-100	25-100	25-75	
	37-60	Stratified sand to very gravelly coarse sand	SP-SM, GP-GM, SP, GP	A-1, A-2, A-3	0	0-7	45-100	40-95	15-65	









Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches			
							4	10	40
368D: Cress-----	In				Pct	Pct			
	0-3	Sandy loam	SM, SC	A-2-4, A-4	0	0-5	85-100	80-100	55-80
	3-15	Sandy loam, fine sandy loam	SC, SM	A-2-4, A-4	0	0-5	85-100	80-100	55-80
	15-31	Loamy sand, coarse sand, gravelly sand, very gravelly loamy sand	SM, SP-SM	A-3	0	0-5	55-100	50-95	20-75
	31-36	Gravelly loamy sand, coarse sand, gravelly sand, very gravelly loamy sand	SP-SM, SM	A-3	0	0-5	55-100	50-100	20-75
	36-60	Stratified sand to very gravelly coarse sand	GP, SP-SM, GP-GM, SP	A-1, A-2, A-3	0	0-5	30-100	25-95	15-65
	0-1	Loamy sand	SM	A-1-b, A-2-4	0	0	80-100	75-100	30-75
	1-7	Loamy sand, sand	SC-SM, SM, SP-SM	A-1-b, A-2	0	0	90-100	75-100	40-75
	7-16	Loamy sand, sand	SM, SP, SP-SM	A-1-b, A-2-4, A-3	0	0	90-100	75-100	40-75
	16-39	Sand, loamy sand	SM, SP, SP-SM	A-1-b, A-2-4, A-3	0	0	90-100	75-100	40-75
371A: Croswell-----	39-60	Sand	SM, SP, SP-SM	A-1-b, A-2-4, A-3	0	0	90-100	75-100	40-70







Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches			
							4	10	40
383B: Mahtomedi-----	In				Pct	Pct			
	0-5	Loamy sand	SC-SM, SM	A-2	0	0-3	85-100	75-100	40-75
	5-8	Sand, coarse sand, loamy	SP-SM, SM	A-2, A-3	0	0-3	85-100	75-100	35-75
	8-15	Gravelly coarse sand, coarse	SP-SM, SM	A-1	0	0-15	60-95	50-90	25-65
		sand, gravelly sand, sand							
	15-30	Gravelly sand, coarse sand,	SM, SP-SM	A-1, A-2, A-3	0	0-15	60-95	50-90	25-65
383C: Mahtomedi-----	30-60	Gravelly sand, coarse sand	SM, SP-SM	A-3, A-1, A-2	0	0-15	55-95	50-90	25-65
	0-5	Loamy sand	SM, SC-SM	A-2	0	0-3	85-100	75-100	40-75
	5-8	Sand, coarse sand, loamy	SP-SM, SM	A-2, A-3	0	0-3	85-100	75-100	35-75
	8-15	Gravelly coarse sand, coarse	SP-SM, SM	A-1	0	0-15	60-95	50-90	25-65
		sand, gravelly sand, sand							
	15-30	Gravelly sand, coarse sand,	SM, SP-SM	A-1, A-2, A-3	0	0-15	60-95	50-90	25-65
383D: Mahtomedi-----	30-60	Gravelly sand, coarse sand	SM, SP-SM	A-3, A-1, A-2	0	0-15	55-95	50-90	25-65
	0-5	Loamy sand	SC-SM, SM	A-2	0	0-3	85-100	75-100	40-75
	5-8	Sand, coarse sand, loamy	SP-SM, SM	A-2, A-3	0	0-3	85-100	75-100	35-75
	8-15	Gravelly coarse sand, coarse	SM, SP-SM	A-1	0	0-15	60-95	50-90	25-65
		sand, gravelly sand, sand							
	15-30	Gravelly sand, coarse sand,	SM, SP-SM	A-1, A-2, A-3	0	0-15	60-95	50-90	25-65
30-60	Gravelly sand, coarse sand	SP-SM, SM	A-3, A-1, A-2	0	0-15	55-95	50-90	25-65	

Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number-				
			Unified	AASHTO	>10 inches	3-10 inches		4	10	40	
						Pct	Pct				
396B: Friendship-----	In										
	0-4	Sand	SM			0	0		95-100	90-100	60-75
	4-29	Sand	SM	A-2, A-3		0	0		95-100	90-100	60-75
	29-60	Sand	SM	A-2, A-3		0	0		95-100	90-100	60-75
Wurtsmith-----	0-6	Sand	SM	A-2, A-3		0	0		85-100	75-100	50-70
	6-33	Sand	SM	A-2, A-3		0	0		85-100	75-100	50-70
	33-60	Sand	SM	A-2, A-3		0	0		85-100	75-100	50-70
Grayling-----	0-3	Sand	SM	A-2, A-3		0	0		95-100	90-100	60-75
	3-15	Sand	SM	A-2, A-3		0	0		95-100	90-100	60-75
	15-23	Sand	SM	A-2, A-3		0	0		95-100	90-100	60-75
	23-60	Sand	SM	A-3, A-2		0	0		95-100	90-100	60-75
397A: Perchlake-----	0-9	Loamy fine sand	SM	A-2-4		0	0		90-100	85-100	75-95
	9-18	Fine sand, sand, loamy fine sand, loamy sand	SM, SP-SM	A-2-4		0	0		90-100	85-100	75-95
	18-42	Sand, loamy sand, loamy fine sand, fine sand	SP-SM, SM	A-2-4		0	0		90-100	85-100	40-55
	42-46	Fine sandy loam, sandy loam, loam	SC-SM, SM	A-4		0	0		90-100	85-100	70-90
399B: Grayling-----	46-60	Sand, fine sand	SM	A-2-4, A-3		0	0		90-100	85-100	55-70
	0-3	Sand	SM	A-2, A-3		0	0		95-100	90-100	60-75
	3-15	Sand	SM	A-2, A-3		0	0		95-100	90-100	60-75
399C: Grayling-----	15-23	Sand	SM	A-2, A-3		0	0		95-100	90-100	60-75
	23-60	Sand	SM	A-3, A-2		0	0		95-100	90-100	60-75
	0-3	Sand	SM	A-2, A-3		0	0		95-100	90-100	60-75
399D: Grayling-----	3-15	Sand	SM	A-2, A-3		0	0		95-100	90-100	60-75
	15-23	Sand	SM	A-2, A-3		0	0		95-100	90-100	60-75
	23-60	Sand	SM	A-3, A-2		0	0		95-100	90-100	60-75

Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passes sieve number				
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40		
405A: Lupton-----  Cathro-----     Tawas-----	In										
	0-65	Muck	PT	A-8	0	0	100	100	---		
	0-28	Muck	PT	A-8	0	0	100	100	---		
	28-49	Loam, silty clay loam, sandy loam	CL-ML, SC, CL, SC-SM	A-4, A-6	0	0-5	80-100	65-100	60-100		
	49-60	Sandy loam, silty clay loam, loam	SC, CL, CL-ML, SC-SM	A-4, A-6	0	0-5	80-100	65-100	60-100		
406A: Loxley-----     407A: Seelyeville-----  Markey-----     410A: Seelyeville-----  Cathro-----	0-31	Muck	PT	A-8	0	0	100	100	---		
	31-60	Fine sand, loamy fine sand, coarse sand, gravelly sand, loamy sand, sand	SC-SM, SM, SP-SM	A-2-4	0	0	100	70-100	65-90		
	0-13	Mucky peat	PT	A-8	0	0	100	100	100		
	13-60	Muck	PT	A-8	0	0	100	100	100		
	0-80	Muck	PT	A-8	0	0	100	100	100		
407A: Seelyeville-----  Markey-----     410A: Seelyeville-----  Cathro-----	0-32	Muck	PT	A-8	0	0	100	100	---		
	32-60	Sand, fine sand, loamy sand, gravelly sand	SM, SP-SM	A-1, A-2, A-3	0	0	70-100	50-100	30-65		
	0-80	Muck	PT	A-8	0	0	100	100	100		
	0-28	Muck	PT	A-8	0	0	100	100	---		
	28-49	Loam, silty clay loam, sandy loam	CL-ML, CL, SC, SC-SM	A-4, A-6	0	0-5	80-100	65-100	60-100		
407A: Seelyeville-----  Markey-----     410A: Seelyeville-----  Cathro-----	49-60	Sandy loam, silty clay loam, loam	SC, SC-SM, CL-ML, CL	A-4, A-6	0	0-5	80-100	65-100	60-100		



Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
412A: Rifle-----	In				Pct	Pct			
	0-4	Peat	PT	A-8	0	0	100	100	---
	4-60	Mucky peat	PT	A-8	0	0	100	100	---
	0-8	Muck	PT	A-8	0	0	100	100	---
Tacoosh-----	8-40	Mucky peat	PT	A-8	0-5	0	100	100	---
	40-42	Very fine sandy loam, sandy	SM, SC-SM	A-4	0	0	85-100	75-100	45-95
		loam, loam							
	42-60	Sandy loam, very fine sandy loam, loam	SC-SM, SM	A-4	0	0	85-100	75-100	45-95
415A: Greenwood-----	0-60	Mucky peat	PT	A-8	0	0	100	100	---
439B: Graycalm-----	0-3	Loamy sand	SM	A-2	0	0-5	95-100	80-100	40-75
	3-22	Sand, loamy sand	SM, SP-SM	A-2	0	0-5	95-100	80-100	40-75
	22-35	Sand, loamy sand	SM	A-2, A-3	0	0-5	95-100	80-100	40-75
	35-60	Stratified sand to loamy sand	SM	A-2, A-3	0	0-5	95-100	80-100	40-80
Menahga-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	100	100	---
	1-2	Loamy sand	SM	A-2	0	0	95-100	80-100	40-75
	2-25	Sand, loamy sand	SM	A-2, A-3	0	0	95-100	85-100	55-75
	25-80	Sand, coarse sand	SM	A-2, A-3	0	0	95-100	85-100	55-70
439C: Graycalm-----	0-3	Loamy sand	SM	A-2	0	0-5	95-100	80-100	40-75
	3-22	Sand, loamy sand	SP-SM, SM	A-2	0	0-5	95-100	80-100	40-75
	22-35	Sand, loamy sand	SM	A-2, A-3	0	0-5	95-100	80-100	40-75
	35-60	Stratified sand to loamy sand	SM	A-2, A-3	0	0-5	95-100	80-100	40-80

Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-			
			Unified	AASHTO	>10 inches	3-10 inches				
							Pct	Pct	4	10
439C: Menahga-----	In									
	0-1	Slightly decomposed plant material	PT	A-8	0	0	100	100	---	
	1-2	Loamy sand	SM	A-2	0	0				
	2-25	Sand, loamy sand	SM	A-2, A-3	0	0	95-100	85-100	40-75	
	25-80	Sand, coarse sand	SM	A-2, A-3	0	0	95-100	85-100	55-75	
439D: Graycalm-----	0-3	Loamy sand	SM	A-2	0	0-5	95-100	80-100	40-75	
	3-22	Sand, loamy sand	SP-SM, SM	A-2	0	0-5	95-100	80-100	40-75	
	22-35	Sand, loamy sand	SM	A-2, A-3	0	0-5	95-100	80-100	40-75	
	35-60	Stratified sand to loamy sand	SM	A-2, A-3	0	0-5	95-100	80-100	40-80	
	Menahga-----	0-1	Slightly decomposed plant material	PT	A-8	0	0	100	100	---
441C: Freeon-----	1-2	Loamy sand	SM	A-2	0	0	95-100	80-100	40-75	
	2-25	Sand, loamy sand	SM	A-2, A-3	0	0	95-100	85-100	55-75	
	25-80	Sand, coarse sand	SM	A-2, A-3	0	0	95-100	85-100	55-70	
	0-4	Silt loam	ML, CL-ML, CL	A-4	0-2	0-5	90-100	85-100	80-10	
	4-19	Silt loam	CL, CL-ML, ML	A-4	0-2	0-5	90-100	85-100	80-10	
	19-39	Sandy loam, gravelly loam	SM, SC, ML, CL	A-1, A-2, A-4	0-5	0-7	60-100	50-90	30-50	
	39-53	Sandy loam, gravelly loam, fine sandy loam	SC-SM, ML, CL-ML, SM	A-1, A-2, A-4	0-5	0-7	60-100	50-90	30-50	
	53-80	Sandy loam, gravelly fine sandy loam	SM, SC-SM	A-1, A-2	0-5	0-7	60-100	50-90	30-50	

Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments			Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	Pct	4	10	40
441C: Cathro-----	In					Pct	Pct			
	0-28	Muck	PT	A-8	0	0	0	100	100	---
	28-49	Loam, silty clay loam, sandy loam	CL-ML, SC, CL, SC-SM	A-4, A-6	0	0-5	0-5	80-100	65-100	60-100
	49-60	Sandy loam, silty clay loam, loam	CL, CL-ML, SC, SC-SM	A-4, A-6	0	0-5	0-5	80-100	65-100	60-100
442C: Haugen-----										
	0-4	Sandy loam	SM, SC-SM	A-2-4, A-4	0-5	0-7	0-7	85-100	75-98	50-70
	4-15	Sandy loam, gravelly sandy loam, fine sandy loam, gravelly loam	SM, SC-SM	A-1, A-2, A-4	0-5	0-7	0-7	55-100	50-90	35-85
	15-23	Gravelly sandy loam, sandy loam, fine sandy loam, gravelly loam	SC-SM, SM	A-1, A-2, A-4	0-5	0-7	0-7	55-100	50-90	35-75
	23-35	Gravelly sandy loam, sandy loam, gravelly fine sandy loam	SC-SM, SM	A-1, A-2, A-4	0-5	0-7	0-7	55-100	50-90	35-75
	35-49	Sandy loam, gravelly sandy loam, fine sandy loam	SC, SM	A-2, A-4, A-1	0-5	0-7	0-7	55-100	50-90	35-75
	49-79	Gravelly sandy loam, sandy loam, fine sandy loam	SC, SC-SM	A-1, A-2	0-5	0-7	0-7	55-100	50-90	35-75
Greenwood-----	79-80	Gravelly sandy loam, sandy loam, fine sandy loam	SC, SC-SM, SM	A-1, A-2, A-4	0-5	0-7	0-7	55-100	50-90	35-75
	0-6	Peat	PT	A-8	0	0	0	100	100	100
	6-60	Mucky peat	PT	A-8	0	0	0	100	100	100

Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches			
							4	10	40
443D: Amery-----	In				Pct	Pct			
	0-3	Sandy loam	SM, SC-SM	A-2-4, A-4	0-5	0-7	85-100	75-98	50-75
	3-22	Sandy loam, loam, gravelly	SM, SC-SM	A-2-4, A-4	0-5	0-7	55-100	50-90	50-75
		loam, gravelly							
	22-34	Sandy loam, fine sandy	SC-SM, SM	A-1-b, A-2-4, A-4	0-5	0-7	55-100	50-90	35-75
		loam, gravelly							
	34-41	Gravelly sandy loam, fine	SM, SC-SM	A-1-b, A-2-4, A-4	0-5	0-7	55-100	50-90	35-75
		sandy loam, sandy loam,							
	41-57	Gravelly sandy loam, fine	SC, SM	A-2-4, A-4, A-1-b	0-5	0-7	55-100	50-90	35-75
		sandy loam, sandy loam,							
	57-71	Sandy loam, fine sandy	SC, SM	A-2-4, A-4, A-1-b	0-5	0-7	55-100	50-90	35-75
		loam, gravelly							
Greenwood-----	0-6	Peat	PT	A-8	0	0	100	100	100
	6-60	Mucky peat	PT	A-8	0	0	100	100	100
	0-38	Muck	PT	A-8	0	0	100	100	---
	38-47	Fine sand, sand, loamy	SM, SP-SM	A-2	0	0	100	100	85-95
		sand							
461A: Bowstring-----	47-80	Muck	PT	A-8	0	0	100	100	---
484A: Greenwood-----	0-6	Peat	PT	A-8	0	0	100	100	100
	6-60	Mucky peat	PT	A-8	0	0	100	100	100
	0-36	Muck	PT	A-8	0	0	100	100	---
	36-60	Silt loam, loam, sandy	CL-ML, SC-SM, CL	A-4, A-2-4	0	0-2	80-100	65-100	40-100
		loam							

Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches			
							4	10	40
495B: Karlsborg-----	In				Pct	Pct			
	0-9	Loamy sand	SM	A-2	0	0	95-100	95-100	70-75
	9-28	Sand, loamy sand	SM	A-2	0	0	95-100	95-100	70-75
	28-48	Clay	CH	A-7	0	0	100	100	85-100
	48-80	Sand	SM	A-2	0	0	100	100	50-70
	0-3	Loamy sand	SC-SM, SM	A-2-4	0	0	90-100	85-100	60-80
	3-32	Sand, loamy sand	SC-SM, SM	A-2-4, A-3	0	0	90-100	85-100	70-95
	32-75	Sand, loamy sand	SC-SM, SM	A-2-4, A-3	0	0	90-100	85-100	70-95
Perida-----	75-80	Sand	SM	A-2-4, A-3	0	0	90-100	85-100	55-75
	0-9	Loamy sand	SM	A-2	0	0	90-100	80-100	60-75
	9-43	Sand, loamy sand, fine sand	SM	A-2	0	0	90-100	80-100	60-75
	43-45	Loamy sand, sand, fine sand	SM	A-2	0	0	90-100	80-100	60-75
	45-60	Clay, silty clay	CH	A-7	0	0	100	100	90-100
	60-74	Silty clay, clay	CH	A-7	0	0	100	100	90-100
	74-80	Sand	SM	A-2-4, A-3	0	0	90-100	85-100	55-75
495C: Karlsborg-----									
	0-9	Loamy sand	SM	A-2	0	0	95-100	95-100	70-75
	9-28	Sand, loamy sand	SM	A-2	0	0	95-100	95-100	70-75
	28-48	Clay	CH	A-7	0	0	100	100	85-100
	48-80	Sand	SM	A-2	0	0	100	100	50-70
	0-3	Loamy sand	SM, SC-SM	A-2-4	0	0	90-100	85-100	60-80
	3-32	Sand, loamy sand	SM, SC-SM	A-2-4, A-3	0	0	90-100	85-100	70-95
	32-75	Sand, loamy sand	SC-SM, SM	A-2-4, A-3	0	0	90-100	85-100	70-95
	75-80	Sand	SM	A-2-4, A-3	0	0	90-100	85-100	55-75



Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass- sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches			
							4	10	40
497A: Meenon-----	In				Pct	Pct			
	0-9	Loamy sand	SM	A-2	0	0	80-100	75-100	45-75
	9-28	Sand, loamy fine sand	SM	A-3	0	0	80-100	75-100	35-75
	28-41	Clay	CH	A-7	0	0	97-100	95-100	80-100
	41-80	Sand, fine sand, loamy fine sand	SM	A-3	0	0	97-100	95-100	60-70
515A: Manitowish-----	0-3	Sandy loam	SM	A-4	0	0-15	80-100	75-100	50-85
	3-4	Sandy loam, loam, gravelly fine sandy loam	SC-SM, SM	A-2-4, A-4	0	0-15	55-100	50-100	35-95
	4-16	Sandy loam, loam, gravelly fine sandy loam	SC-SM, SM	A-2-4, A-4	0	0-15	55-100	50-100	35-95
	16-19	Loamy coarse sand, gravelly loamy sand, sand	GC-GM, GM, SC-SM, SM	A-1, A-2, A-3	0	0-15	45-100	40-95	20-70
	19-60	Stratified sand to very gravelly coarse sand	SP, GP-GM, GP, SP-SM	A-1, A-2, A-3	0	0-15	45-100	40-95	15-65





Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass-		
			Unified	AASHTO	>10 inches	3-10 inches	sieve number -		
							4	10	40
524E: Metonga-----	In				Pct				
	0-3	Silt loam	CL-ML, ML	A-4	2-3	0-7	95-100	90-100	90-100
	3-4	Very fine sandy loam, silt loam, fine sandy loam	ML, CL-ML, SC-SM, SM	A-4	0	0-7	95-100	90-100	65-100
	4-25	Very fine sandy loam, silt loam, fine sandy loam	CL-ML, ML, SC-SM, SM	A-4	0	0-7	95-100	90-100	65-100
	25-28	Sandy loam, gravelly fine sandy loam	SM	A-1-b, A-2-4	0	0-15	55-95	50-90	30-75
	28-80	Unweathered bedrock	---	---	---	---	---	---	---
	0-4	Sandy loam	SM, SC-SM	A-2-4, A-4	0-5	0-7	85-100	75-98	50-70
	4-15	Sandy loam, gravelly sandy loam, fine sandy loam, gravelly loam	SC-SM, SM	A-1, A-2, A-4	0-5	0-7	55-100	50-90	35-85
	15-23	Gravelly sandy loam, sandy loam, fine sandy loam, sandy loam, gravelly loam	SC-SM, SM	A-1, A-2, A-4	0-5	0-7	55-100	50-90	35-75
	23-35	Gravelly sandy loam, sandy loam, gravelly fine sandy loam	SM, SC-SM	A-1, A-2, A-4	0-5	0-7	55-100	50-90	35-75
542B: Haugen, very stony-----	35-49	Sandy loam, gravelly sandy loam, fine sandy loam	SC, SM	A-2, A-4, A-1	0-5	0-7	55-100	50-90	35-75
	49-79	Gravelly sandy loam, sandy loam, fine sandy loam, sandy loam	SC, SC-SM	A-1, A-2	0-5	0-7	55-100	50-90	35-75
	79-80	Gravelly sandy loam, sandy loam, fine sandy loam	SC-SM, SM, SC	A-1, A-2, A-4	0-5	0-7	55-100	50-90	35-75



Table 23.---Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments			Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	60
542C: Haugen, very stony-----	In					Pct				
	0-4	Sandy loam	SC-SM, SM	A-2-4, A-4	0-5	0-7	85-100	75-98	50-70	35-55
	4-15	Sandy loam, gravelly sandy loam, fine	SM, SC-SM	A-1, A-2, A-4	0-5	0-7	55-100	50-90	35-85	
		loam, fine								
		sandy loam, gravelly loam								
	15-23	Gravelly sandy loam, sandy loam, fine	SC-SM, SM	A-1, A-2, A-4	0-5	0-7	55-100	50-90	35-75	
		sandy loam, gravelly loam								
	23-35	Gravelly sandy loam, sandy loam, gravelly fine sandy loam	SM, SC-SM	A-1, A-2, A-4	0-5	0-7	55-100	50-90	35-75	
	35-49	Sandy loam, gravelly sandy loam, fine	SM, SC	A-2, A-4, A-1	0-5	0-7	55-100	50-90	35-75	
		sandy loam								
	49-79	Gravelly sandy loam, sandy loam, fine	SC, SC-SM	A-1, A-2	0-5	0-7	55-100	50-90	35-75	
		sandy loam								
	79-80	Gravelly sandy loam, sandy loam, fine sandy loam	SC, SM, SC-SM	A-1, A-2, A-4	0-5	0-7	55-100	50-90	35-75	

Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number -				
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40		
542C: Haugen-----	In					Pct					
	0-7	Sandy loam	SM, SC-SM	A-2-4, A-4	0-5	0-7	85-100	75-98	50-70		
	7-15	Sandy loam, gravelly sandy loam, fine sandy loam, gravelly loam	SM, SC-SM	A-1, A-2, A-4	0-5	0-7	55-100	50-90	35-85		
	15-23	Gravelly sandy loam, sandy loam, fine sandy loam, gravelly loam	SC-SM, SM	A-1, A-2, A-4	0-5	0-7	55-100	50-90	35-75		
	23-35	Gravelly sandy loam, sandy loam, gravelly fine sandy loam	SC-SM, SM	A-1, A-2, A-4	0-5	0-7	55-100	50-90	35-75		
	35-49	Sandy loam, gravelly sandy loam, fine sandy loam	SC, SM	A-2, A-4, A-1	0-5	0-7	55-100	50-90	35-75		
	49-79	Gravelly sandy loam, sandy loam, fine sandy loam	SC-SM, SC	A-1, A-2	0-5	0-7	55-100	50-90	35-75		
	79-80	Gravelly sandy loam, sandy loam, fine sandy loam	SM, SC-SM, SC	A-1, A-2, A-4	0-5	0-7	55-100	50-90	35-75		
	543B: Anigon-----	0-10	Silt loam	CL, CL-ML	A-4	0	0-7	95-100	90-100	80-100	
		10-14	Silt loam, silt	CL, ML, CL-ML	A-4	0	0-7	95-100	90-100	80-100	
14-20		Silt loam	ML, CL	A-4, A-6	0	0-7	95-100	90-100	80-100		
20-30		Silt loam	CL, ML	A-4, A-6	0	0-7	95-100	90-100	80-100		
30-34		Sandy loam, loam, gravelly loam	SC	A-1, A-2, A-4, A-6	0	0-7	50-100	45-100	30-90		
34-60		Stratified sand to very gravelly coarse sand	GP, GP-GM, SP, SP-SM	A-1, A-2, A-3	0	0-7	45-100	40-95	15-65		

Table 23.---Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass-		
			Unified	AASHTO	>10 inches	3-10 inches	sieve number-		
							4	10	40
543C2: Anigon-----	In				Pct	Pct			
	0-10	Silt loam	CL-ML, CL	A-4	0	0-7	95-100	90-100	80-100
	10-14	Silt loam, silt	ML, CL-ML, CL	A-4	0	0-7	95-100	90-100	80-100
	14-20	Silt loam	CL, ML	A-4, A-6	0	0-7	95-100	90-100	80-100
	20-30	Silt loam	ML, CL	A-4, A-6	0	0-7	95-100	90-100	80-100
	30-34	Sandy loam, loam, gravelly loam	SC A-1, A-2, A-4, A-6		0	0-7	50-100	45-100	30-90
544F: Menahga-----	34-60	Stratified sand to very gravelly coarse sand	SP-SM, SP, GP-GM, GP	A-1, A-2, A-3	0	0-7	45-100	40-95	15-65
	0-1	Slightly decomposed plant material	PT	A-8	0	0	100	100	---
	1-2	Sand	SM	A-2, A-3	0	0	95-100	85-100	55-70
	2-25	Sand, loamy sand	SM	A-2, A-3	0	0	95-100	85-100	55-75
	25-80	Sand, coarse sand	SM	A-2, A-3	0	0	95-100	85-100	55-70
	0-5	Loamy sand	SC-SM, SM	A-2	0	0-3	85-100	75-100	40-75
Mahtomedi-----	5-8	Sand, coarse sand, loamy coarse sand	SM, SP-SM	A-2, A-3	0	0-3	85-100	75-100	35-75
	8-15	Gravelly coarse sand, coarse sand, gravelly sand, sand	SM, SP-SM	A-1	0	0-15	60-95	50-90	25-65
	15-30	Gravelly sand, coarse sand, sand	SM, SP-SM	A-1, A-2, A-3	0	0-15	60-95	50-90	25-65
	30-60	Gravelly sand, coarse sand	SM, SP-SM	A-2, A-3, A-1	0	0-15	55-95	50-90	25-65

Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass- sieve number—					
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40			
555A: Fordum-----	In					Pct	Pct					
	0-6	Silt loam	CL, ML, CL-ML	A-4, A-6	0	0-7	80-100	75-100	70-100			
	6-18	Silt loam, fine sandy loam, mucky sandy loam, gravelly loam	SM, ML, CL, SC	A-1, A-2, A-4	0	0-15	60-100	50-100	35-100			
	18-30	Fine sandy loam, silt loam, mucky sandy loam, gravelly loam	CL, SM, SC, ML	A-1, A-2, A-4	0	0-15	60-100	50-100	30-100			
	30-60	Sand, very gravelly loamy fine sand, gravelly coarse sand, fine sand	SP, GP, SP-SM, SM	A-1, A-2, A-3	0	0-15	30-100	25-100	7-95			
	0-2	Loamy sand	SM	A-1	0	0-15	85-100	75-100	45-75	45-75		
	2-4	Loamy sand, sand	SP-SM, SM	A-1	0	0-15	85-100	75-100	40-75			
574B: Sayner-----	4-7	Loamy sand, sand, gravelly coarse sand, loamy coarse sand	SP-SM, SM	A-1, A-3	0	0-15	70-100	50-100	25-75			
	7-14	Sand, loamy sand, gravelly sand, loamy coarse sand	SP-SM, SM	A-1, A-3	0	0-15	70-100	50-100	25-75			
	14-22	Gravelly sand, loamy sand, coarse sand, loamy coarse sand	SP-SM, SP, SM	A-1, A-3	0	0-15	70-100	50-100	25-75			
	22-60	Stratified sand to very gravelly coarse sand	SP-SM, SP	A-1	0	0-15	60-85	40-85	25-45			







Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments			Percentage pass- sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	Pct	4	10	40
615C: Cress-----	In					Pct	Pct			
	0-3	Sandy loam	SM, SC	A-2-4, A-4	0	0-5	0-5	85-100	80-100	55-80
	3-15	Sandy loam, fine sandy loam	SM, SC	A-2-4, A-4	0	0-5	0-5	85-100	80-100	55-80
	15-31	Loamy sand, coarse sand, gravelly sand, very gravelly loamy sand	SM, SP-SM	A-3	0	0-5	0-5	55-100	50-95	20-75
	31-36	Gravelly loamy sand, coarse sand, gravelly sand, very gravelly loamy sand	SM, SP-SM	A-3	0	0-5	0-5	55-100	50-100	20-75
	36-60	Stratified sand to very gravelly coarse sand	SP-SM, GP, GP-GM, SP	A-1, A-2, A-3	0	0-5	0-5	30-100	25-95	15-65
	0-3	Sandy loam	SM, SC	A-2-4, A-4	0	0-5	0-5	85-100	80-100	55-80
	3-15	Sandy loam, fine sandy loam	SC, SM	A-2-4, A-4	0	0-5	0-5	85-100	80-100	55-80
	15-31	Loamy sand, coarse sand, gravelly sand, very gravelly loamy sand	SM, SP-SM	A-3	0	0-5	0-5	55-100	50-95	20-75
	31-36	Gravelly loamy sand, coarse sand, gravelly sand, very gravelly loamy sand	SP-SM, SM	A-3	0	0-5	0-5	55-100	50-100	20-75
615D: Cress-----	36-60	Stratified sand to very gravelly coarse sand	SP-SM, GP, SP, GP-GM	A-1, A-2, A-3	0	0-5	0-5	30-100	25-95	15-65
	0-3	Sandy loam	SM, SC	A-2-4, A-4	0	0-5	0-5	85-100	80-100	55-80
	3-15	Sandy loam, fine sandy loam	SC, SM	A-2-4, A-4	0	0-5	0-5	85-100	80-100	55-80
	15-31	Loamy sand, coarse sand, gravelly sand, very gravelly loamy sand	SM, SP-SM	A-3	0	0-5	0-5	55-100	50-95	20-75
	31-36	Gravelly loamy sand, coarse sand, gravelly sand, very gravelly loamy sand	SP-SM, SM	A-3	0	0-5	0-5	55-100	50-100	20-75
	36-60	Stratified sand to very gravelly coarse sand	SP-SM, GP, SP, GP-GM	A-1, A-2, A-3	0	0-5	0-5	30-100	25-95	15-65
	0-3	Sandy loam	SM, SC	A-2-4, A-4	0	0-5	0-5	85-100	80-100	55-80
	3-15	Sandy loam, fine sandy loam	SC, SM	A-2-4, A-4	0	0-5	0-5	85-100	80-100	55-80
	15-31	Loamy sand, coarse sand, gravelly sand, very gravelly loamy sand	SM, SP-SM	A-3	0	0-5	0-5	55-100	50-95	20-75
	31-36	Gravelly loamy sand, coarse sand, gravelly sand, very gravelly loamy sand	SP-SM, SM	A-3	0	0-5	0-5	55-100	50-100	20-75



Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches			
							4	10	40
632A: Aftad-----	In					Pct	Pct		
	0-10	Fine sandy loam	SM	A-4	0	0	0	95-100	90-100 65-90
	10-29	Fine sandy loam, very fine sandy loam, loam, loamy sand	SM, CL-ML, ML, SC-SM	A-2-4, A-4	0	0	0	95-100	90-100 45-95
	29-36	Fine sandy loam, very fine sandy loam, sandy loam, loam	SM, CL, ML, SC	A-4	0	0	0	95-100	90-100 65-95
	36-41	Fine sandy loam, very fine sandy loam, sandy loam, loam	SC, ML, CL, SM	A-4	0	0	0	95-100	90-100 65-95
	41-60	Stratified fine sand to silt	ML, SM, SC-SM, CL-ML	A-4	0	0	0	95-100	90-100 60-95
	0-10	Fine sandy loam	SM	A-4	0	0	0	95-100	90-100 65-90
	10-29	Fine sandy loam, very fine sandy loam, loam, loamy sand	CL-ML, ML, SC-SM, SM	A-2-4, A-4	0	0	0	95-100	90-100 45-95
	29-36	Fine sandy loam, very fine sandy loam, sandy loam, loam	SC, SM, ML, CL	A-4	0	0	0	95-100	90-100 65-95
	36-41	Fine sandy loam, very fine sandy loam, sandy loam, loam	CL, ML, SC, SM	A-4	0	0	0	95-100	90-100 65-95
632B: Aftad-----	41-60	Stratified fine sand to silt	CL-ML, ML, SC-SM, SM	A-4	0	0	0	95-100	90-100 60-95
	0-10	Fine sandy loam	SM	A-4	0	0	0	95-100	90-100 65-90
	10-29	Fine sandy loam, very fine sandy loam, loam, loamy sand	CL-ML, ML, SC-SM, SM	A-2-4, A-4	0	0	0	95-100	90-100 45-95
	29-36	Fine sandy loam, very fine sandy loam, sandy loam, loam	SC, SM, ML, CL	A-4	0	0	0	95-100	90-100 65-95
	36-41	Fine sandy loam, very fine sandy loam, sandy loam, loam	CL, ML, SC, SM	A-4	0	0	0	95-100	90-100 65-95
	41-60	Stratified fine sand to silt	CL-ML, ML, SC-SM, SM	A-4	0	0	0	95-100	90-100 60-95
	0-10	Fine sandy loam	SM	A-4	0	0	0	95-100	90-100 65-90
	10-29	Fine sandy loam, very fine sandy loam, loam, loamy sand	CL-ML, ML, SC-SM, SM	A-2-4, A-4	0	0	0	95-100	90-100 45-95
	29-36	Fine sandy loam, very fine sandy loam, sandy loam, loam	SC, SM, ML, CL	A-4	0	0	0	95-100	90-100 65-95
	36-41	Fine sandy loam, very fine sandy loam, sandy loam, loam	CL, ML, SC, SM	A-4	0	0	0	95-100	90-100 65-95









Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
670E: Keweenaw-----	In				Pct	Pct			
	0-2	Sandy loam	SC, SM, SC-SM	A-2	0-2	0-20	90-100	75-100	55-80
	2-4	Gravelly loamy fine sand,	SM, SC-SM, SC	A-1-b, A-2, A-2-4	0	0-50	85-100	65-100	45-75
		loamy sand,							
		sandy loam,							
		cobbly loamy sand							
	4-16	Gravelly loamy sand, loamy	SM, SC-SM, SC	A-2, A-1-b, A-2-4	0	0-25	85-100	65-100	45-75
		sand, cobbly							
		loamy fine sand, sandy							
		loam							
	16-20	Loamy sand, cobbly loamy	SC-SM, SC, SP-SM, SM	A-2, A-1-b	0	0-25	85-100	65-100	45-75
		fine sand, gravelly loamy							
		sand, sand							
	20-27	Loamy sand, cobbly sand,	SP-SM, SC, SC-SM, SM	A-1-b, A-2, A-2-4	0	0-25	85-100	65-100	45-75
		gravelly loamy fine sand							
	27-43	Sand, cobbly loamy sand,	SP-SM, SC, SC-SM, SM	A-3, A-1-b, A-2, A-2-4	0	0-25	85-100	65-100	40-80
		gravelly loamy fine sand,							
		sandy loam							
	43-75	Loamy sand, sandy loam,	SC-SM, SC, SM	A-1-b, A-2, A-2-4	0	0-25	85-100	65-100	45-80
		fine sandy loam, gravelly							
		loamy fine sand							
	75-80	Loamy sand, gravelly loamy	SC, SC-SM, SM, SP-SM	A-1-b, A-2, A-2-4	0	0-25	85-100	65-100	45-75
		sand, cobbly sand							









Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass-		
			Unified	AASHTO	>10 inches	3-10 inches	sieve number-		
							4	10	40
706A: Winterfield-----	In				Pct	Pct			
	0-7	Very fine sandy loam	SM, SC-SM	A-4	0	0	100	95-100	85-100
	7-60	Sand, gravelly sand, gravelly loamy sand, loamy sand	SP-SM, SM	A-1-b, A-2-4, A-3	0	0	60-100	60-100	40-75
Totagatic-----	0-4	Fine sandy loam	SM, CL, ML, SC	A-4	0	0	100	100	70-85
	4-8	Loamy fine sand, loamy sand, fine sand, sand	SM	A-2	0	0	100	100	50-80
	8-17	Fine sand, sand, loamy sand, loamy fine sand	SM	A-2	0	0	100	100	50-80
	17-28	Fine sand, sand, loamy sand, coarse sand, mucky sand	SM	A-2, A-3	0	0	100	100	50-80
	28-46	Sand, fine sand, loamy sand, coarse sand, coarse sand, mucky sand	SM	A-2, A-3	0	0	100	100	50-80
	46-70	Sand, coarse sand, loamy sand, fine sand, loamy fine sand	SM	A-2, A-3	0	0	100	100	50-80
	70-80	Sand, coarse sand, fine sand, loamy sand, loamy fine sand	SM	A-2, A-3	0	0	100	100	50-80



Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass-		
			Unified	AASHTO	>10 inches	3-10 inches	sieve number-		
							4	10	40
771A: Lenroot-----	In				Pct	Pct			
	0-4	Loamy sand	SM, SC-SM	A-1, A-2	0	0	85-100	75-100	40-75
	4-8	Loamy sand, coarse sand, gravelly sand, gravelly loamy coarse sand	SM, SP-SM	A-1, A-2	0	0	60-95	50-90	25-70
	8-14	Loamy coarse sand, coarse sand, gravelly sand, loamy sand	SM, SP-SM	A-1, A-2, A-3	0	0	60-95	50-90	25-70
	14-21	Gravelly coarse sand, gravelly sand, sand	SM, SP-SM	A-1, A-2, A-3	0	0	60-95	50-90	25-65
	21-80	Stratified coarse sand to gravelly coarse sand	SP-SM, SM	A-2, A-1, A-3	0	0	60-95	50-90	25-65
	0-9	Sandy loam	SC, SM	A-2-4, A-4	0	0-9	80-100	75-100	50-80
827A: Scoba-----	9-16	Sandy loam, loam, gravelly fine sandy loam	GM, SC, SM	A-1-b, A-2-4, A-4	0	0-9	55-100	50-100	35-80
	16-20	Sandy loam, gravelly loam, fine sandy loam	SM, GM, SC	A-1-b, A-2-4, A-4	0	0-9	55-100	50-100	35-75
	20-26	Sandy loam, gravelly loam, fine sandy loam	GM, SC, SM	A-1-b, A-2-4, A-4	0	0-9	55-100	50-100	35-75
	26-31	Loamy sand, very gravelly loamy coarse sand	GM, SM	A-1-a, A-2-4, A-3	0	0-25	30-100	25-100	15-80
	31-60	Stratified sand to very gravelly coarse sand	GP, GP-GM, SP, SP-SM	A-1, A-2, A-3	0	0-25	30-100	25-95	15-65



Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches			
							4	10	40
856B: Stinnett-----	In				Pct	Pct			
	0-4	Silt loam	CL-ML, ML	A-4	0-2	0-5	90-100	85-100	80-100
	4-7	Silt loam, silt	ML, CL-ML	A-4	0-2	0-5	90-100	85-100	70-100
	7-18	Silt, silt loam	ML, CL-ML	A-4	0-2	0-5	90-100	85-100	70-100
	18-29	Silt loam	CL-ML, CL	A-4	0-2	0-5	90-100	85-100	80-100
	29-34	Loam, sandy	SM, SC	A-1-b, A-2-4,	0-5	0-7	60-100	50-90	30-50
		loam, gravelly		A-4					
		sandy loam							
	34-41	Sandy loam,	SM, SC	A-1-b, A-2-4,	0-5	0-7	60-100	50-90	30-90
857B: Frogcreek-----		loam, gravelly		A-4					
		sandy loam							
	41-55	Loamy sand,	SM, SC-SM	A-1, A-2-4	0-5	0-7	60-100	50-90	25-70
		gravelly loamy							
		sand							
	55-80	Loamy sand,	SM, SC-SM	A-1, A-2-4	0-5	0-7	60-100	50-90	25-70
		gravelly loamy							
		sand							
856B: Stinnett-----	0-4	Silt loam	ML, CL-ML	A-4	0-2	0-5	90-100	85-100	80-100
	4-13	Silt loam, silt	CL-ML, ML	A-4	0-2	0-5	90-100	85-100	80-100
	13-19	Silt loam,	SC, SM	A-1-b, A-2-4	0-5	0-7	60-100	50-90	30-50
		loam, sandy							
		loam, gravelly							
		sandy loam							
	19-32	Sandy loam,	SC, SM	A-1-b, A-2-4	0-5	0-7	60-100	50-90	30-80
		loam, gravelly							
		sandy loam							
	32-46	Gravelly sandy	SC, SM	A-1-b, A-2-4	0-5	0-7	60-100	50-90	30-80
856B: Stinnett-----		loam, sandy							
		loam, loam							
	46-80	Gravelly loamy	SM, SP-SM,	A-1, A-2-4	0-5	0-7	60-100	50-90	25-70
		sand, loamy	SC-SM						
		sand							





Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
					>10 inches	3-10 inches			
			Unified	AASHTO	Pct	Pct	4	10	40
873C: Stanberry-----	In								
	0-1	Highly decomposed plant material	PT	A-8	0-5	0-7	100	100	---
	1-3	Sandy loam, loam, fine sandy loam	SC-SM, ML, CL-ML, SM	A-2-4, A-4	0-5	0-7	90-100	85-100	55-95
	3-19	Sandy loam, loam, gravelly fine sandy loam	CL-ML, ML, SC-SM, SM	A-2-4, A-4	0-5	0-7	90-100	70-100	55-95
	19-24	Sandy loam, gravelly sandy loam	SC-SM, SM	A-2-4, A-4	0-5	0-7	75-100	70-100	40-70
	24-32	Sandy loam, gravelly sandy loam	SC-SM	A-2-4, A-4	0-5	0-7	75-100	70-100	40-70
873D: Stanberry-----	32-42	Loamy sand, gravelly loamy sand	SM, SC-SM	A-1-b, A-2-4	0-5	0-7	75-100	70-100	35-75
	42-80	Loamy sand, gravelly loamy sand	GC-GM, GM, SC-SM, SM	A-1-b, A-2-4	0-5	0-7	60-95	55-90	30-75
	0-1	Highly decomposed plant material	PT	A-8	0-5	0-7	100	100	---
	1-3	Sandy loam, loam, fine sandy loam	SC-SM, CL-ML, ML, SM	A-2-4, A-4	0-5	0-7	90-100	85-100	55-95
	3-19	Sandy loam, loam, gravelly fine sandy loam	SM, SC-SM, ML, CL-ML	A-2-4, A-4	0-5	0-7	90-100	70-100	55-95
	19-24	Sandy loam, gravelly sandy loam	SM, SC-SM	A-2-4, A-4	0-5	0-7	75-100	70-100	40-70
	24-32	Sandy loam, gravelly sandy loam	SC-SM	A-2-4, A-4	0-5	0-7	75-100	70-100	40-70
	32-42	Loamy sand, gravelly loamy sand	SM, SC-SM	A-1-b, A-2-4	0-5	0-7	75-100	70-100	35-75
	42-80	Loamy sand, gravelly loamy sand	SM, SC-SM, GM, GC-GM	A-1-b, A-2-4	0-5	0-7	60-95	55-90	30-75
	0-1	Highly decomposed plant material	PT	A-8	0-5	0-7	100	100	---
	1-3	Sandy loam, loam, fine sandy loam	SC-SM, CL-ML, ML, SM	A-2-4, A-4	0-5	0-7	90-100	85-100	55-95
	3-19	Sandy loam, loam, gravelly fine sandy loam	SM, SC-SM, ML, CL-ML	A-2-4, A-4	0-5	0-7	90-100	70-100	55-95
	19-24	Sandy loam, gravelly sandy loam	SM, SC-SM	A-2-4, A-4	0-5	0-7	75-100	70-100	40-70
	24-32	Sandy loam, gravelly sandy loam	SC-SM	A-2-4, A-4	0-5	0-7	75-100	70-100	40-70
	32-42	Loamy sand, gravelly loamy sand	SM, SC-SM	A-1-b, A-2-4	0-5	0-7	75-100	70-100	35-75
	42-80	Loamy sand, gravelly loamy sand	SM, SC-SM, GM, GC-GM	A-1-b, A-2-4	0-5	0-7	60-95	55-90	30-75
	0-1	Highly decomposed plant material	PT	A-8	0-5	0-7	100	100	---
	1-3	Sandy loam, loam, fine sandy loam	SC-SM, CL-ML, ML, SM	A-2-4, A-4	0-5	0-7	90-100	85-100	55-95



Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
943D: Stanberry-----	In				Pct	Pct			
	0-1	Highly decomposed plant material	PT	A-8	0-5	0-7	100	100	---
	1-3	Sandy loam, loam, fine sandy loam	CL-ML, ML, SC-SM, SM	A-2-4, A-4	0-5	0-7	90-100	85-100	55-95
	3-19	Sandy loam, loam, gravelly fine sandy loam	SM, ML, CL-ML, SC-SM	A-2-4, A-4	0-5	0-7	90-100	70-100	55-95
	19-24	Sandy loam, gravelly sandy loam	SM, SC-SM	A-2-4, A-4	0-5	0-7	75-100	70-100	40-70
	24-32	Sandy loam, gravelly sandy loam	SC-SM	A-2-4, A-4	0-5	0-7	75-100	70-100	40-70
	32-42	Loamy sand, gravelly loamy sand	SC-SM, SM	A-1-b, A-2-4	0-5	0-7	75-100	70-100	35-75
	42-80	Loamy sand, gravelly loamy sand	SM, GM, SC-SM, GC-GM	A-1-b, A-2-4	0-5	0-7	60-95	55-90	30-75
	0-6	Peat	PT	A-8	0	0	100	100	---
	6-60	Mucky peat	PT	A-8	0	0	100	100	---
Greenwood-----									



Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass- sieve number-			
			Unified	AASHTO	>10 inches	3-10 inches				
							4	10	40	
970C: Kweenaw-----	In					Pct				
	0-2	Sandy loam	SC, SM, SC-SM	A-2	0-2	0-20	90-100	75-100	55-80	
	2-4	Sandy loam, cobbly loamy sand, loamy sand, gravelly loamy fine sand	SC, SC-SM, SM	A-1-b, A-2, A-2-4	0	0-50	85-100	65-100	45-75	
	4-16	Sandy loam, cobbly loamy fine sand, loamy sand, gravelly loamy sand	SM, SC-SM, SC	A-2, A-1-b, A-2-4	0	0-25	85-100	65-100	45-75	
	16-20	Loamy sand, cobbly loamy fine sand, gravelly loamy sand, sand	SC-SM, SP-SM, SM, SC	A-2, A-1-b	0	0-25	85-100	65-100	45-75	
	20-27	Loamy sand, cobbly sand, gravelly loamy fine sand	SC, SC-SM, SM, SP-SM	A-1-b, A-2, A-2-4	0	0-25	85-100	65-100	45-75	
	27-43	Sand, cobbly loamy sand, gravelly loamy fine sand	SP-SM, SM, SC-SM, SC	A-3, A-1-b, A-2, A-2-4	0	0-25	85-100	65-100	40-80	
	43-75	sandy loam Loamy sand, sandy loam, gravelly loamy fine sand, loamy sand, fine sandy loam	SC, SC-SM, SM	A-1-b, A-2, A-2-4	0	0-25	85-100	65-100	45-80	
	75-80	Loamy sand, gravelly loamy sand, cobbly sand	SM, SP-SM, SC-SM, SC	A-1-b, A-2, A-2-4	0	0-25	85-100	65-100	45-75	













Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches			
							4	10	40
1080B: Spoonershill, stony-----	In					Pct			
	0-3	Sandy loam	SM, SC, SC-SM	A-2, A-4					
	3-12	Gravelly sandy loam, loamy sand, gravelly loamy sand	SM, SC-SM, SC A-1-b, A-2, A-4		0-2	0-15	85-100	80-95	55-75
					0	0-15	60-100	50-95	35-75
	12-16	Gravelly loamy sand, loamy sand, sandy loam	SP-SM, SM, SC-SM, SC						
					0	0-15	60-100	50-95	35-75
	16-34	Loamy sand, sand, gravelly loamy sand	SP-SM, SM, SC-SM, SC						
					0	0-15	60-100	50-95	35-75
	34-46	Sand, loamy sand, gravelly loamy sand	SM, SC, SP-SM, SC-SM						
Cress-----	46-80	Gravelly loamy sand, loamy sand, sand	SC, SC-SM, SM, SP-SM		0	0-15	60-100	50-95	35-75
	0-3	Sandy loam	SC, SM		0	0-5	85-100	80-100	55-80
	3-15	Sandy loam, fine sandy loam	SC, SM		0	0-5	85-100	80-100	55-80
	15-31	Loamy sand, coarse sand, gravelly sand, very gravelly loamy sand	SM, SP-SM						
					0	0-5	55-100	50-95	20-75
	31-36	Gravelly loamy sand, coarse sand, gravelly sand, very gravelly loamy sand	SP-SM, SM						
					0	0-5	55-100	50-100	20-75
	36-60	Stratified sand to very gravelly coarse sand	SP, GP-GM, GP, SP-SM						
					0	0-5	30-100	25-95	15-65

Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number			
			Unified	AASHTO	>10 inches	3-10 inches	Pct			
							Pct	Pct	Pct	
1653C: Stanberry-----	In									
	0-1	Highly decomposed Plant material	PT	A-8		0-5	0-7	100	100	---
	1-3	Sandy loam, loam, fine sandy loam	CL-ML, ML, SC-SM, SM	A-2-4, A-4	0-5	0-7	90-100	85-100	55-95	
	3-19	Sandy loam, loam, gravelly fine sandy loam	CL-ML, ML, SC-SM, SM	A-2-4, A-4	0-5	0-7	90-100	70-100	55-95	
	19-24	Sandy loam, gravelly sandy loam	SM, SC-SM	A-2-4, A-4	0-5	0-7	75-100	70-100	40-70	
	24-32	Sandy loam, gravelly sandy loam	SC-SM	A-2-4, A-4	0-5	0-7	75-100	70-100	40-70	
	32-42	Loamy sand, gravelly loamy sand	SM, SC-SM	A-1-b, A-2-4	0-5	0-7	75-100	70-100	35-75	
	42-80	Loamy sand, gravelly loamy sand	GC-GM, GM, SC-SM, SM	A-1-b, A-2-4	0-5	0-7	60-95	55-90	30-75	
	0-5	Sandy loam	SM	A-2-4	0-5	0-7	90-100	85-100	55-70	
	5-8	Sandy loam, fine sandy loam	SM, SC-SM, ML, CL-ML	A-2, A-4	0-5	0-7	90-100	85-100	55-95	
Parkfalls-----	8-17	Sandy loam, loam, gravelly fine sandy loam	SC-SM, CL-ML, ML, SM	A-2, A-4	0-5	0-7	90-100	70-100	55-95	
	17-30	Sandy loam, gravelly sandy loam	SC-SM, SM	A-2, A-4	0-5	0-7	75-100	70-100	40-70	
	30-33	Sandy loam, gravelly sandy loam	SC-SM	A-2, A-4	0-5	0-7	75-100	70-100	40-70	
	33-48	Sandy loam, gravelly sandy loam	SC-SM	A-1-b, A-2	0-5	0-7	75-100	70-100	35-75	
	48-80	Loamy sand, gravelly loamy sand	SM, GC-GM, GM, SC-SM	A-1-b, A-2	0-5	0-7	60-95	55-90	30-75	

Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass sieve number-		
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40
In					Pct	Pct			
1653C: Wozny-----	0-3	Muck	PT	A-8	2-3	0	100	100	100
	3-17	Silt loam	CL-ML, ML	A-4	0-5	0-7	80-100	75-100	70-100
	17-37	Silt loam	CL-ML, CL	A-4	0-5	0-7	80-100	75-100	70-100
	37-56	Stratified sandy loam to gravelly loam	SC-SM, SM	A-1, A-2	0-5	0-7	60-100	50-90	30-90
	56-80	Loamy sand, gravelly loamy sand	SC-SM, SM	A-1, A-2-4	0-5	0-7	60-100	50-90	25-70
2015. Pits									
2050. Landfill									
3011A: Barronett-----	0-9	Silt loam	CL, CL-ML, ML	A-4, A-6	0	0	98-100	95-100	90-100
	9-16	Silt loam	ML, CL-ML, CL	A-4	0	0	98-100	95-100	90-100
	16-34	Silt loam, silty clay loam	CL	A-4, A-6	0	0	98-100	95-100	90-100
	34-60	Stratified silt loam to very fine sand	CL-ML, CL, ML	A-4	0	0	98-100	95-100	85-100
3125A: Meehan-----	0-5	Loamy sand	SM	A-2	0	0	95-100	90-100	60-75
	5-8	Sand	SM	A-2	0	0	95-100	90-100	60-75
	8-28	Sand	SM	A-2	0	0	95-100	90-100	60-75
	28-60	Sand	SM	A-2, A-3	0	0	95-100	90-100	60-70
3126A: Wurtsmith-----	0-9	Loamy sand	SM	A-2	0	0	85-100	75-100	55-75
	9-37	Coarse sand, sand	SM	A-2, A-3	0	0	85-100	75-100	50-70
	37-60	Sand, coarse sand	SM	A-2, A-3	0	0	85-100	75-100	50-70



Table 23.--Engineering Index Properties--Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage pass-				
			Unified	AASHTO	>10 inches	3-10 inches	sieve number-				
							4	10	40		
3312B: Glendenning-----	In					Pct	Pct				
	0-7	Sandy loam	SC-SM, SM	A-2, A-4	0	0-15	80-100	75-98	50-60		
	7-15	Sandy loam, fine sandy loam, gravelly loam	SM, SC-SM	A-2, A-4	0	0-15	55-100	50-98	35-75		
	15-20	Sandy loam, fine sandy loam, gravelly loam	SC-SM, SM	A-2-4, A-4	0	0-15	55-100	50-98	35-75		
	20-26	Sandy loam, fine sandy loam, gravelly loam	SM, SC-SM	A-2-4, A-4	0	0-15	55-100	50-98	35-75		
	26-40	Sandy loam, fine sandy loam	SM, SC-SM	A-2-4, A-4	0	0-15	55-100	50-98	35-75		
	40-65	Sandy loam, loam, gravelly fine sandy loam	SM, SC-SM	A-2-4, A-4	0	0-15	55-100	50-98	35-75		
	65-80	Sandy loam, gravelly fine sandy loam	SC-SM, SM	A-2-4, A-4	0	0-15	55-100	50-98	35-75		
	3336A: Fenander-----	0-9	Fine sandy loam	SM, ML	A-4	0	0	95-100	93-100	75-85	
		9-15	Fine sandy loam, sandy loam, silt loam	SM, SC-SM, ML, CL-ML	A-4	0	0	95-100	93-100	75-90	
15-27		Loam, sandy loam, fine sandy loam, silt loam	SC-SM, CL-ML	A-4	0	0	95-100	93-100	75-90		
27-33		Fine sandy loam, sandy loam, loam	SC-SM	A-4	0	0	95-100	93-100	75-90		
33-80		Stratified loamy fine sand to fine sandy loam	SC-SM	A-2-4, A-4	0	0	95-100	93-100	45-85		









Table 23.--Engineering Index Properties--Continued

[illegible]

Table 24.--Physical Properties of the Soils

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer. Absence of an entry indicates that data were not estimated)

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
<b>3A:</b>												
<b>Totagatic-----</b>	0-4	0-0	0.15-0.45	6.00-20	0.35-0.45	---	55-85	.02	.02	5	8	0
	4-8	0-10	1.40-1.65	6.00-20	0.05-0.15	0.0-2.9	0.0-0.5	.10	.15			
	8-17	0-10	1.40-1.65	6.00-20	0.05-0.15	0.0-2.9	0.0-0.5	.10	.15			
	17-28	0-10	1.40-1.65	6.00-20	0.05-0.10	0.0-2.9	0.0-10	.10	.15			
	28-46	0-10	1.40-1.65	6.00-20	0.05-0.10	0.0-2.9	0.0-10	.10	.15			
	46-70	0-10	1.40-1.65	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.10	.15			
	70-80	0-10	1.40-1.65	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.10	.15			
<b>Bowstring-----</b>	0-38	0-0	0.10-0.35	0.20-6.00	0.35-0.45	---	70-90	.02	.02	3	8	0
	38-47	0-10	1.40-1.65	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.10	.15			
	47-80	0-0	0.10-0.35	0.20-6.00	0.35-0.45	---	70-90	.02	.02			
<b>Ausable-----</b>	0-10	0-0	0.15-0.45	0.20-6.00	0.35-0.45	---	55-85	.02	.02	2	8	0
	10-60	1-10	1.50-1.70	6.00-20	0.05-0.07	0.0-2.9	0.0-0.5	.02	.02			
<b>22A:</b>												
<b>Comstock-----</b>	0-8	8-22	1.35-1.55	0.60-2.00	0.20-0.24	0.0-2.9	2.0-4.0	.37	.37	5	5	56
	8-15	8-20	1.40-1.65	0.60-2.00	0.20-0.22	0.0-2.9	0.0-1.0	.43	.43			
	15-21	15-28	1.40-1.65	0.60-2.00	0.18-0.22	3.0-5.9	0.0-0.5	.43	.43			
	21-34	18-30	1.40-1.65	0.60-2.00	0.18-0.22	3.0-5.9	0.0-0.5	.43	.43			
	34-44	8-20	1.40-1.70	0.60-2.00	0.12-0.22	0.0-2.9	0.0-0.5	.37	.37			
	44-60	8-20	1.40-1.65	0.20-0.60	0.12-0.22	0.0-2.9	0.0-0.5	.37	.37			
<b>24A:</b>												
<b>Poskin-----</b>	0-9	13-17	1.35-1.55	0.60-2.00	0.21-0.24	0.0-2.9	2.0-4.0	.37	.37	4	5	56
	9-12	10-15	1.55-1.65	0.60-2.00	0.17-0.22	0.0-2.9	0.0-1.0	.43	.43			
	12-19	15-22	1.55-1.65	0.60-2.00	0.17-0.22	0.0-2.9	0.0-1.0	.43	.43			
	19-36	18-27	1.55-1.65	0.60-2.00	0.17-0.22	0.0-2.9	0.0-0.5	.43	.43			
	36-39	5-25	1.40-1.65	0.60-2.00	0.05-0.22	0.0-2.9	0.0-0.5	.24	.24			
	39-60	0-5	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
<b>27A:</b>												
<b>Scott Lake-----</b>	0-10	6-15	1.35-1.70	0.60-2.00	0.12-0.14	0.0-2.9	2.0-3.0	.24	.24	4	3	86
	10-17	6-15	1.40-1.70	0.60-2.00	0.11-0.13	0.0-2.9	0.0-0.5	.32	.32			
	17-24	8-17	1.40-1.70	0.60-2.00	0.11-0.13	0.0-2.9	0.0-0.5	.24	.24			
	24-31	2-12	1.45-1.70	2.00-6.00	0.02-0.10	0.0-2.9	0.0-0.5	.17	.17			
	31-80	1-6	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
<b>28B:</b>												
<b>Haugen, very stony----</b>	0-4	6-14	1.40-1.65	0.60-2.00	0.12-0.14	0.0-2.9	1.0-3.0	.24	.24	5	8	0
	4-15	4-14	1.40-1.70	0.60-2.00	0.08-0.19	0.0-2.9	0.5-1.0	.24	.24			
	15-23	4-14	1.40-1.70	0.60-2.00	0.08-0.19	0.0-2.9	0.5-1.0	.24	.24			
	23-35	5-15	1.40-1.70	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.5	.24	.24			
	35-49	6-16	1.40-1.70	0.20-0.60	0.05-0.13	0.0-2.9	0.0-0.5	.24	.24			
	49-79	8-18	1.40-1.70	0.20-0.60	0.05-0.13	0.0-2.9	0.0-0.5	.24	.24			
	79-80	6-15	1.80-1.90	0.01-0.06	0.02-0.05	0.0-2.9	0.0-0.5	.24	.24			
<b>Haugen-----</b>	0-7	6-14	1.40-1.65	0.60-2.00	0.12-0.14	0.0-2.9	1.0-3.0	.24	.24	5	3	86
	7-15	4-14	1.40-1.70	0.60-2.00	0.08-0.19	0.0-2.9	0.5-1.0	.24	.24			
	15-23	4-14	1.40-1.70	0.60-2.00	0.08-0.19	0.0-2.9	0.5-1.0	.24	.24			
	23-35	5-15	1.40-1.70	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.5	.24	.24			
	35-49	6-16	1.40-1.70	0.20-0.60	0.05-0.13	0.0-2.9	0.0-0.5	.24	.24			
	49-79	8-18	1.40-1.70	0.20-0.60	0.05-0.13	0.0-2.9	0.0-0.5	.24	.24			
	79-80	6-15	1.80-1.90	0.01-0.06	0.02-0.05	0.0-2.9	0.0-0.5	.24	.24			

Table 24.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
<b>28B:</b>												
Rosholt, very stony---	0-4	4-10	1.50-1.60	0.60-6.00	0.12-0.14	0.0-2.9	1.0-3.0	.24	.24	4	3	86
	4-10	3-12	1.70-1.80	0.60-6.00	0.05-0.16	0.0-2.9	0.0-1.0	.24	.24			
	10-14	5-14	1.70-1.80	0.60-6.00	0.05-0.16	0.0-2.9	0.0-1.0	.24	.24			
	14-28	6-15	1.65-1.75	0.60-6.00	0.06-0.19	0.0-2.9	0.0-0.5	.24	.24			
	28-34	4-12	1.55-1.65	0.60-6.00	0.02-0.10	0.0-2.9	0.0-0.5	.10	.17			
	34-60	1-6	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
Rosholt-----	0-8	4-10	1.50-1.60	0.60-6.00	0.12-0.14	0.0-2.9	1.0-3.0	.24	.24	4	3	86
	8-10	3-12	1.70-1.80	0.60-6.00	0.05-0.16	0.0-2.9	0.0-1.0	.24	.24			
	10-14	5-14	1.70-1.80	0.60-6.00	0.05-0.16	0.0-2.9	0.0-1.0	.24	.24			
	14-28	6-15	1.65-1.75	0.60-6.00	0.06-0.19	0.0-2.9	0.0-0.5	.24	.24			
	28-34	4-12	1.55-1.65	0.60-6.00	0.02-0.10	0.0-2.9	0.0-0.5	.10	.17			
	34-60	1-6	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
<b>28C:</b>												
Haugen, very stony---	0-4	6-14	1.40-1.65	0.60-2.00	0.12-0.14	0.0-2.9	1.0-3.0	.24	.24	5	3	86
	4-15	4-14	1.40-1.70	0.60-2.00	0.08-0.19	0.0-2.9	0.5-1.0	.24	.24			
	15-23	4-14	1.40-1.70	0.60-2.00	0.08-0.19	0.0-2.9	0.5-1.0	.24	.24			
	23-35	5-15	1.40-1.70	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.5	.24	.24			
	35-49	6-16	1.40-1.70	0.20-0.60	0.05-0.13	0.0-2.9	0.0-0.5	.24	.24			
	49-79	8-18	1.40-1.70	0.20-0.60	0.05-0.13	0.0-2.9	0.0-0.5	.24	.24			
	79-80	6-15	1.80-1.90	0.01-0.06	0.02-0.05	0.0-2.9	0.0-0.5	.24	.24			
Haugen-----	0-7	6-14	1.40-1.65	0.60-2.00	0.12-0.14	0.0-2.9	1.0-3.0	.24	.24	5	3	86
	7-15	4-14	1.40-1.70	0.60-2.00	0.08-0.19	0.0-2.9	0.5-1.0	.24	.24			
	15-23	4-14	1.40-1.70	0.60-2.00	0.08-0.19	0.0-2.9	0.5-1.0	.24	.24			
	23-35	5-15	1.40-1.70	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.5	.24	.24			
	35-49	6-16	1.40-1.70	0.20-0.60	0.05-0.13	0.0-2.9	0.0-0.5	.24	.24			
	49-79	8-18	1.40-1.70	0.20-0.60	0.05-0.13	0.0-2.9	0.0-0.5	.24	.24			
	79-80	6-15	1.80-1.90	0.01-0.06	0.02-0.05	0.0-2.9	0.0-0.5	.24	.24			
Rosholt, very stony---	0-4	4-10	1.50-1.60	0.60-6.00	0.12-0.14	0.0-2.9	1.0-3.0	.24	.24	4	3	86
	4-10	3-12	1.70-1.80	0.60-6.00	0.05-0.16	0.0-2.9	0.0-1.0	.24	.24			
	10-14	5-14	1.70-1.80	0.60-6.00	0.05-0.16	0.0-2.9	0.0-1.0	.24	.24			
	14-28	6-15	1.65-1.75	0.60-6.00	0.06-0.19	0.0-2.9	0.0-0.5	.24	.24			
	28-34	4-12	1.55-1.65	0.60-6.00	0.02-0.10	0.0-2.9	0.0-0.5	.10	.17			
	34-60	1-6	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
Rosholt-----	0-8	4-10	1.50-1.60	0.60-6.00	0.12-0.14	0.0-2.9	1.0-3.0	.24	.24	4	3	86
	8-10	3-12	1.70-1.80	0.60-6.00	0.05-0.16	0.0-2.9	0.0-1.0	.24	.24			
	10-14	5-14	1.70-1.80	0.60-6.00	0.05-0.16	0.0-2.9	0.0-1.0	.24	.24			
	14-28	6-15	1.65-1.75	0.60-6.00	0.06-0.19	0.0-2.9	0.0-0.5	.24	.24			
	28-34	4-12	1.55-1.65	0.60-6.00	0.02-0.10	0.0-2.9	0.0-0.5	.10	.17			
	34-60	1-6	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
<b>33B:</b>												
Chetek-----	0-10	4-12	1.35-1.70	0.60-2.00	0.12-0.14	0.0-2.9	1.0-3.0	.24	.24	3	3	86
	10-16	7-17	1.40-1.70	0.60-2.00	0.06-0.19	0.0-2.9	0.0-0.5	.24	.24			
	16-20	3-10	1.60-1.70	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.17	.17			
	20-60	1-3	1.50-1.60	6.00-20	0.02-0.04	0.0-2.9	0.0-0.5	.10	.15			
<b>33C:</b>												
Chetek-----	0-10	4-12	1.35-1.70	0.60-2.00	0.12-0.14	0.0-2.9	1.0-3.0	.24	.24	3	3	86
	10-16	7-17	1.40-1.70	0.60-2.00	0.06-0.19	0.0-2.9	0.0-0.5	.24	.24			
	16-20	3-10	1.60-1.70	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.17	.17			
	20-60	1-3	1.50-1.60	6.00-20	0.02-0.04	0.0-2.9	0.0-0.5	.10	.15			

Table 24.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
38A: Rosholt-----	0-8	4-10	1.50-1.60	0.60-6.00	0.12-0.14	0.0-2.9	1.0-3.0	.24	.24	4	3	86
	8-10	3-12	1.70-1.80	0.60-6.00	0.05-0.16	0.0-2.9	0.0-1.0	.24	.24			
	10-14	5-14	1.70-1.80	0.60-6.00	0.05-0.16	0.0-2.9	0.0-1.0	.24	.24			
	14-28	6-15	1.65-1.75	0.60-6.00	0.06-0.19	0.0-2.9	0.0-0.5	.24	.24			
	28-34	4-12	1.55-1.65	0.60-6.00	0.02-0.10	0.0-2.9	0.0-0.5	.10	.17			
	34-60	1-6	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
38B: Rosholt-----	0-8	4-10	1.50-1.60	0.60-6.00	0.12-0.14	0.0-2.9	1.0-3.0	.24	.24	4	3	86
	8-10	3-12	1.70-1.80	0.60-6.00	0.05-0.16	0.0-2.9	0.0-1.0	.24	.24			
	10-14	5-14	1.70-1.80	0.60-6.00	0.05-0.16	0.0-2.9	0.0-1.0	.24	.24			
	14-28	6-15	1.65-1.75	0.60-6.00	0.06-0.19	0.0-2.9	0.0-0.5	.24	.24			
	28-34	4-12	1.55-1.65	0.60-6.00	0.02-0.10	0.0-2.9	0.0-0.5	.10	.17			
	34-60	1-6	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
38C: Rosholt-----	0-8	4-10	1.50-1.60	0.60-6.00	0.12-0.14	0.0-2.9	1.0-3.0	.24	.24	4	3	86
	8-10	3-12	1.70-1.80	0.60-6.00	0.05-0.16	0.0-2.9	0.0-1.0	.24	.24			
	10-14	5-14	1.70-1.80	0.60-6.00	0.05-0.16	0.0-2.9	0.0-1.0	.24	.24			
	14-28	6-15	1.65-1.75	0.60-6.00	0.06-0.19	0.0-2.9	0.0-0.5	.24	.24			
	28-34	4-12	1.55-1.65	0.60-6.00	0.02-0.10	0.0-2.9	0.0-0.5	.10	.17			
	34-60	1-6	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
38D: Rosholt-----	0-8	4-10	1.50-1.60	0.60-6.00	0.12-0.14	0.0-2.9	1.0-3.0	.24	.24	4	3	86
	8-10	3-12	1.70-1.80	0.60-6.00	0.05-0.16	0.0-2.9	0.0-1.0	.24	.24			
	10-14	5-14	1.70-1.80	0.60-6.00	0.05-0.16	0.0-2.9	0.0-1.0	.24	.24			
	14-28	6-15	1.65-1.75	0.60-6.00	0.06-0.19	0.0-2.9	0.0-0.5	.24	.24			
	28-34	4-12	1.55-1.65	0.60-6.00	0.02-0.10	0.0-2.9	0.0-0.5	.10	.17			
	34-60	1-6	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
42D: Amery-----	0-3	4-12	1.05-1.25	0.60-2.00	0.12-0.14	0.0-2.9	1.0-3.0	.24	.24	5	3	86
	3-22	4-15	1.50-1.70	0.60-2.00	0.09-0.19	0.0-2.9	0.0-0.5	.24	.24			
	22-34	4-14	1.65-1.90	0.20-0.60	0.07-0.16	0.0-2.9	0.0-0.5	.24	.24			
	34-41	4-15	1.65-1.90	0.20-0.60	0.07-0.16	0.0-2.9	0.0-0.5	.24	.24			
	41-57	6-17	1.65-1.90	0.20-0.60	0.07-0.16	0.0-2.9	0.0-0.5	.20	.28			
	57-71	6-17	1.65-1.90	0.20-0.60	0.07-0.16	0.0-2.9	0.0-0.5	.20	.28			
	71-80	4-15	1.80-2.00	0.02-0.20	0.02-0.05	0.0-2.9	0.0-0.5	.28	.28			
43B: Antigo-----	0-9	8-15	1.25-1.55	0.60-2.00	0.20-0.24	0.0-2.9	1.0-3.0	.37	.37	4	5	56
	9-12	8-15	1.35-1.55	0.60-2.00	0.20-0.22	0.0-2.9	0.0-1.0	.43	.43			
	12-19	8-17	1.55-1.65	0.60-2.00	0.16-0.22	0.0-2.9	0.0-0.5	.43	.43			
	19-28	8-17	1.55-1.65	0.60-2.00	0.16-0.22	0.0-2.9	0.0-0.5	.43	.43			
	28-31	2-17	1.55-1.70	0.60-2.00	0.05-0.19	0.0-2.9	0.0-0.5	.24	.24			
	31-33	2-17	1.55-1.70	0.60-2.00	0.05-0.19	0.0-2.9	0.0-0.5	.24	.24			
	33-60	0-5	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
43C: Antigo-----	0-9	8-15	1.25-1.55	0.60-2.00	0.20-0.24	0.0-2.9	1.0-3.0	.37	.37	4	5	56
	9-12	8-15	1.35-1.55	0.60-2.00	0.20-0.22	0.0-2.9	0.0-1.0	.43	.43			
	12-19	8-17	1.55-1.65	0.60-2.00	0.16-0.22	0.0-2.9	0.0-0.5	.43	.43			
	19-28	8-17	1.55-1.65	0.60-2.00	0.16-0.22	0.0-2.9	0.0-0.5	.43	.43			
	28-31	2-17	1.55-1.70	0.60-2.00	0.05-0.19	0.0-2.9	0.0-0.5	.24	.24			
	31-33	2-17	1.55-1.70	0.60-2.00	0.05-0.19	0.0-2.9	0.0-0.5	.24	.24			
	33-60	0-5	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			

Table 24.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
43D:												
Antigo-----	0-9	8-15	1.25-1.55	0.60-2.00	0.20-0.24	0.0-2.9	1.0-3.0	.37	.37	4	5	56
	9-12	8-15	1.35-1.55	0.60-2.00	0.20-0.22	0.0-2.9	0.0-1.0	.43	.43			
	12-19	8-17	1.55-1.65	0.60-2.00	0.16-0.22	0.0-2.9	0.0-0.5	.43	.43			
	19-28	8-17	1.55-1.65	0.60-2.00	0.16-0.22	0.0-2.9	0.0-0.5	.43	.43			
	28-31	2-17	1.55-1.70	0.60-2.00	0.05-0.19	0.0-2.9	0.0-0.5	.24	.24			
	31-33	2-17	1.55-1.70	0.60-2.00	0.05-0.19	0.0-2.9	0.0-0.5	.24	.24			
	33-60	0-5	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
48A:												
Brill-----	0-7	10-20	1.25-1.45	0.60-2.00	0.20-0.24	0.0-2.9	2.0-4.0	.37	.37	4	5	56
	7-11	8-20	1.35-1.55	0.60-2.00	0.16-0.22	0.0-2.9	0.0-1.0	.43	.43			
	11-19	10-20	1.40-1.55	0.60-2.00	0.16-0.22	0.0-2.9	0.0-0.5	.43	.43			
	19-34	18-27	1.50-1.60	0.60-2.00	0.16-0.22	0.0-2.9	0.0-0.5	.43	.43			
	34-38	5-25	1.55-1.70	0.60-2.00	0.05-0.19	0.0-2.9	0.0-0.5	.24	.24			
	38-60	0-5	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
63A:												
Crystal Lake-----	0-8	8-20	1.35-1.55	0.60-2.00	0.20-0.24	0.0-2.9	2.0-4.0	.37	.37	5	5	56
	8-12	8-20	1.40-1.60	0.60-2.00	0.20-0.22	0.0-2.9	0.0-1.0	.43	.43			
	12-20	15-27	1.40-1.60	0.60-2.00	0.18-0.22	0.0-2.9	0.0-0.5	.43	.43			
	20-32	18-30	1.50-1.60	0.60-2.00	0.18-0.22	3.0-5.9	0.0-0.5	.43	.43			
	32-60	8-20	1.40-1.65	0.20-0.60	0.20-0.22	0.0-2.9	0.0-0.5	.37	.37			
63B:												
Crystal Lake-----	0-8	8-20	1.35-1.55	0.60-2.00	0.20-0.24	0.0-2.9	2.0-4.0	.37	.37	5	5	56
	8-12	8-20	1.40-1.60	0.60-2.00	0.20-0.22	0.0-2.9	0.0-1.0	.43	.43			
	12-20	15-27	1.40-1.60	0.60-2.00	0.18-0.22	0.0-2.9	0.0-0.5	.43	.43			
	20-32	18-30	1.50-1.60	0.60-2.00	0.18-0.22	3.0-5.9	0.0-0.5	.43	.43			
	32-60	8-20	1.40-1.65	0.20-0.60	0.20-0.22	0.0-2.9	0.0-0.5	.37	.37			
63C:												
Crystal Lake-----	0-8	8-20	1.35-1.55	0.60-2.00	0.20-0.24	0.0-2.9	2.0-4.0	.37	.37	5	5	56
	8-12	8-20	1.40-1.60	0.60-2.00	0.20-0.22	0.0-2.9	0.0-1.0	.43	.43			
	12-20	15-27	1.40-1.60	0.60-2.00	0.18-0.22	0.0-2.9	0.0-0.5	.43	.43			
	20-32	18-30	1.50-1.60	0.60-2.00	0.18-0.22	3.0-5.9	0.0-0.5	.43	.43			
	32-60	8-20	1.40-1.65	0.20-0.60	0.20-0.22	0.0-2.9	0.0-0.5	.37	.37			
63E:												
Crystal Lake-----	0-8	8-20	1.35-1.55	0.60-2.00	0.20-0.24	0.0-2.9	2.0-4.0	.37	.37	5	5	56
	8-12	8-20	1.40-1.60	0.60-2.00	0.20-0.22	0.0-2.9	0.0-1.0	.43	.43			
	12-20	15-27	1.40-1.60	0.60-2.00	0.18-0.22	0.0-2.9	0.0-0.5	.43	.43			
	20-32	18-30	1.50-1.60	0.60-2.00	0.18-0.22	3.0-5.9	0.0-0.5	.43	.43			
	32-60	8-20	1.40-1.65	0.20-0.60	0.20-0.22	0.0-2.9	0.0-0.5	.37	.37			
64A:												
Totagatic-----	0-4	0-0	0.15-0.45	6.00-20	0.35-0.45	---	55-85	.02	.02	5	8	0
	4-8	0-10	1.40-1.65	6.00-20	0.05-0.15	0.0-2.9	0.0-0.5	.10	.15			
	8-17	0-10	1.40-1.65	6.00-20	0.05-0.15	0.0-2.9	0.0-0.5	.10	.15			
	17-28	0-10	1.40-1.65	6.00-20	0.05-0.10	0.0-2.9	0.0-10	.10	.15			
	28-46	0-10	1.40-1.65	6.00-20	0.05-0.10	0.0-2.9	0.0-10	.10	.15			
	46-70	0-10	1.40-1.65	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.10	.15			
	70-80	0-10	1.40-1.65	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.10	.15			
Winterfield-----	0-7	0-15	0.90-1.50	6.00-20	0.09-0.11	0.0-2.9	2.0-4.0	.10	.10	5	2	134
	7-60	0-10	1.55-1.65	6.00-20	0.04-0.10	0.0-2.9	0.0-0.5	.10	.17			



Table 24.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
69B:												
Keweenaw-----	0-2	2-10	1.35-1.60	2.00-6.00	0.10-0.12	0.0-2.9	1.0-2.0	.10	.10	5	2	134
	2-4	2-15	1.45-1.80	2.00-6.00	0.09-0.14	0.0-2.9	0.5-1.0	.17	.24			
	4-16	2-15	1.55-1.80	2.00-6.00	0.08-0.13	0.0-2.9	0.0-0.5	.17	.24			
	16-20	2-10	1.55-1.80	2.00-6.00	0.05-0.10	0.0-2.9	0.0-0.5	.17	.24			
	20-27	2-10	1.55-1.80	0.60-6.00	0.05-0.10	0.0-2.9	0.0-0.5	.17	.24			
	27-43	2-15	1.55-1.80	0.60-6.00	0.05-0.10	0.0-2.9	0.0-0.5	.17	.24			
	43-75	5-20	1.55-1.80	0.60-6.00	0.08-0.13	0.0-2.9	0.0-0.5	.17	.24			
	75-80	2-10	1.50-1.70	2.00-6.00	0.05-0.10	0.0-2.9	0.0-0.5	.17	.17			
Sayner-----	0-2	2-10	1.25-1.45	2.00-6.00	0.08-0.12	0.0-2.9	1.0-3.0	.10	.10	5	2	134
	2-4	0-10	1.35-1.55	2.00-20	0.04-0.11	0.0-2.9	0.5-1.0	.10	.10			
	4-7	0-10	1.35-1.65	2.00-20	0.03-0.11	0.0-2.9	1.0-2.0	.10	.10			
	7-14	0-10	1.35-1.65	2.00-20	0.03-0.11	0.0-2.9	1.0-2.0	.02	.02			
	14-22	0-10	1.45-1.70	2.00-20	0.03-0.11	0.0-2.9	0.0-0.5	.02	.02			
	22-60	0-5	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
Vilas-----	0-2	2-10	1.35-1.65	6.00-20	0.09-0.12	0.0-2.9	1.0-3.0	.10	.10	5	2	134
	2-4	2-10	1.35-1.65	6.00-20	0.09-0.11	0.0-2.9	0.5-1.0	.10	.10			
	4-11	2-10	1.50-1.65	6.00-20	0.09-0.11	0.0-2.9	1.0-2.0	.10	.10			
	11-23	0-10	1.50-1.70	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.02	.02			
	23-32	0-5	1.50-1.70	6.00-20	0.05-0.07	0.0-2.9	0.0-0.5	.02	.02			
	32-80	0-5	1.50-1.70	6.00-20	0.05-0.07	0.0-2.9	0.0-0.5	.02	.02			
69C:												
Keweenaw-----	0-2	2-10	1.35-1.60	2.00-6.00	0.10-0.12	0.0-2.9	1.0-2.0	.10	.10	5	2	134
	2-4	2-15	1.45-1.80	2.00-6.00	0.09-0.14	0.0-2.9	0.5-1.0	.17	.24			
	4-16	2-15	1.55-1.80	2.00-6.00	0.08-0.13	0.0-2.9	0.0-0.5	.17	.24			
	16-20	2-10	1.55-1.80	2.00-6.00	0.05-0.10	0.0-2.9	0.0-0.5	.17	.24			
	20-27	2-10	1.55-1.80	0.60-6.00	0.05-0.10	0.0-2.9	0.0-0.5	.17	.24			
	27-43	2-15	1.55-1.80	0.60-6.00	0.05-0.10	0.0-2.9	0.0-0.5	.17	.24			
	43-75	5-20	1.55-1.80	0.60-6.00	0.08-0.13	0.0-2.9	0.0-0.5	.17	.24			
	75-80	2-10	1.50-1.70	2.00-6.00	0.05-0.10	0.0-2.9	0.0-0.5	.17	.17			
Sayner-----	0-2	2-10	1.25-1.45	2.00-6.00	0.08-0.12	0.0-2.9	1.0-3.0	.10	.10	5	2	134
	2-4	0-10	1.35-1.55	2.00-20	0.04-0.11	0.0-2.9	0.5-1.0	.10	.10			
	4-7	0-10	1.35-1.65	2.00-20	0.03-0.11	0.0-2.9	1.0-2.0	.10	.10			
	7-14	0-10	1.35-1.65	2.00-20	0.03-0.11	0.0-2.9	1.0-2.0	.02	.02			
	14-22	0-10	1.45-1.70	2.00-20	0.03-0.11	0.0-2.9	0.0-0.5	.02	.02			
	22-60	0-5	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
Vilas-----	0-2	2-10	1.35-1.65	6.00-20	0.09-0.12	0.0-2.9	1.0-3.0	.10	.10	5	2	134
	2-4	2-10	1.35-1.65	6.00-20	0.09-0.11	0.0-2.9	0.5-1.0	.10	.10			
	4-11	2-10	1.50-1.65	6.00-20	0.09-0.11	0.0-2.9	1.0-2.0	.10	.10			
	11-23	0-10	1.50-1.70	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.02	.02			
	23-32	0-5	1.50-1.70	6.00-20	0.05-0.07	0.0-2.9	0.0-0.5	.02	.02			
	32-80	0-5	1.50-1.70	6.00-20	0.05-0.07	0.0-2.9	0.0-0.5	.02	.02			
69E:												
Keweenaw-----	0-2	2-10	1.35-1.60	2.00-6.00	0.10-0.12	0.0-2.9	1.0-2.0	.10	.10	5	2	134
	2-4	2-15	1.45-1.80	2.00-6.00	0.09-0.14	0.0-2.9	0.5-1.0	.17	.24			
	4-16	2-15	1.55-1.80	2.00-6.00	0.08-0.13	0.0-2.9	0.0-0.5	.17	.24			
	16-20	2-10	1.55-1.80	2.00-6.00	0.05-0.10	0.0-2.9	0.0-0.5	.17	.24			
	20-27	2-10	1.55-1.80	0.60-6.00	0.05-0.10	0.0-2.9	0.0-0.5	.17	.24			
	27-43	2-15	1.55-1.80	0.60-6.00	0.05-0.10	0.0-2.9	0.0-0.5	.17	.24			
	43-75	5-20	1.55-1.80	0.60-6.00	0.08-0.13	0.0-2.9	0.0-0.5	.17	.24			
	75-80	2-10	1.50-1.70	2.00-6.00	0.05-0.10	0.0-2.9	0.0-0.5	.17	.17			

Table 24.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
<b>69E:</b>												
<b>Sayner-----</b>	0-2	2-10	1.25-1.45	2.00-6.00	0.08-0.12	0.0-2.9	1.0-3.0	.10	.10	5	2	134
	2-4	0-10	1.35-1.55	2.00-20	0.04-0.11	0.0-2.9	0.5-1.0	.10	.10			
	4-7	0-10	1.35-1.65	2.00-20	0.03-0.11	0.0-2.9	1.0-2.0	.10	.10			
	7-14	0-10	1.35-1.65	2.00-20	0.03-0.11	0.0-2.9	1.0-2.0	.02	.02			
	14-22	0-10	1.45-1.70	2.00-20	0.03-0.11	0.0-2.9	0.0-0.5	.02	.02			
	22-60	0-5	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
<b>Vilas-----</b>	0-2	2-10	1.35-1.65	6.00-20	0.09-0.12	0.0-2.9	1.0-3.0	.10	.10	5	2	134
	2-4	2-10	1.35-1.65	6.00-20	0.09-0.11	0.0-2.9	0.5-1.0	.10	.10			
	4-11	2-10	1.50-1.65	6.00-20	0.09-0.11	0.0-2.9	1.0-2.0	.10	.10			
	11-23	0-10	1.50-1.70	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.02	.02			
	23-32	0-5	1.50-1.70	6.00-20	0.05-0.07	0.0-2.9	0.0-0.5	.02	.02			
	32-80	0-5	1.50-1.70	6.00-20	0.05-0.07	0.0-2.9	0.0-0.5	.02	.02			
<b>74B:</b>												
<b>Vilas-----</b>	0-2	2-10	1.35-1.65	6.00-20	0.09-0.12	0.0-2.9	1.0-3.0	.10	.10	5	2	134
	2-4	2-10	1.35-1.65	6.00-20	0.09-0.11	0.0-2.9	0.5-1.0	.10	.10			
	4-11	2-10	1.50-1.65	6.00-20	0.09-0.11	0.0-2.9	1.0-2.0	.10	.10			
	11-23	0-10	1.50-1.70	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.02	.02			
	23-32	0-5	1.50-1.70	6.00-20	0.05-0.07	0.0-2.9	0.0-0.5	.02	.02			
	32-80	0-5	1.50-1.70	6.00-20	0.05-0.07	0.0-2.9	0.0-0.5	.02	.02			
<b>74C:</b>												
<b>Vilas-----</b>	0-2	2-10	1.35-1.65	6.00-20	0.09-0.12	0.0-2.9	1.0-3.0	.10	.10	5	2	134
	2-4	2-10	1.35-1.65	6.00-20	0.09-0.11	0.0-2.9	0.5-1.0	.10	.10			
	4-11	2-10	1.50-1.65	6.00-20	0.09-0.11	0.0-2.9	1.0-2.0	.10	.10			
	11-23	0-10	1.50-1.70	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.02	.02			
	23-32	0-5	1.50-1.70	6.00-20	0.05-0.07	0.0-2.9	0.0-0.5	.02	.02			
	32-80	0-5	1.50-1.70	6.00-20	0.05-0.07	0.0-2.9	0.0-0.5	.02	.02			
<b>74D:</b>												
<b>Vilas-----</b>	0-2	2-10	1.35-1.65	6.00-20	0.09-0.12	0.0-2.9	1.0-3.0	.10	.10	5	2	134
	2-4	2-10	1.35-1.65	6.00-20	0.09-0.11	0.0-2.9	0.5-1.0	.10	.10			
	4-11	2-10	1.50-1.65	6.00-20	0.09-0.11	0.0-2.9	1.0-2.0	.10	.10			
	11-23	0-10	1.50-1.70	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.02	.02			
	23-32	0-5	1.50-1.70	6.00-20	0.05-0.07	0.0-2.9	0.0-0.5	.02	.02			
	32-80	0-5	1.50-1.70	6.00-20	0.05-0.07	0.0-2.9	0.0-0.5	.02	.02			
<b>100B:</b>												
<b>Menahga-----</b>	0-2	0-8	1.40-1.65	6.00-20	0.06-0.08	0.0-2.9	0.5-2.0	.02	.02	5	1	220
	2-25	0-15	1.25-1.60	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.10	.15			
	25-80	0-10	1.50-1.65	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.10	.15			
<b>100C:</b>												
<b>Menahga-----</b>	0-1	0-0	0.15-0.30	6.00-20	0.55-0.65	---	65-85	.02	.02	5	1	220
	1-2	0-8	1.40-1.65	6.00-20	0.06-0.08	0.0-2.9	0.5-2.0	.02	.02			
	2-25	0-15	1.25-1.60	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.10	.15			
	25-80	0-10	1.50-1.65	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.10	.15			
<b>100D:</b>												
<b>Menahga-----</b>	0-1	0-0	0.15-0.30	6.00-20	0.55-0.65	---	65-85	.02	.02	5	1	220
	1-2	0-8	1.40-1.65	6.00-20	0.06-0.08	0.0-2.9	0.5-2.0	.02	.02			
	2-25	0-15	1.25-1.60	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.10	.15			
	25-80	0-10	1.50-1.65	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.10	.15			

Table 24.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
127D:												
Amery-----	0-3	4-12	1.05-1.25	0.60-2.00	0.12-0.14	0.0-2.9	1.0-3.0	.24	.24	5	3	86
	3-22	4-15	1.50-1.70	0.60-2.00	0.09-0.19	0.0-2.9	0.0-0.5	.24	.24			
	22-34	4-14	1.65-1.90	0.20-0.60	0.07-0.16	0.0-2.9	0.0-0.5	.24	.24			
	34-41	4-15	1.65-1.90	0.20-0.60	0.07-0.16	0.0-2.9	0.0-0.5	.24	.24			
	41-57	6-17	1.65-1.90	0.20-0.60	0.07-0.16	0.0-2.9	0.0-0.5	.20	.28			
	57-71	6-17	1.65-1.90	0.20-0.60	0.07-0.16	0.0-2.9	0.0-0.5	.20	.28			
	71-80	4-15	1.80-2.00	0.02-0.20	0.02-0.05	0.0-2.9	0.0-0.5	.28	.28			
Rosholt-----	0-4	4-10	1.50-1.60	0.60-6.00	0.12-0.14	0.0-2.9	1.0-3.0	.24	.24	4	3	86
	4-10	3-12	1.70-1.80	0.60-6.00	0.05-0.16	0.0-2.9	0.0-1.0	.24	.24			
	10-14	5-14	1.70-1.80	0.60-6.00	0.05-0.16	0.0-2.9	0.0-1.0	.24	.24			
	14-28	6-15	1.65-1.75	0.60-6.00	0.06-0.19	0.0-2.9	0.0-0.5	.24	.24			
	28-34	4-12	1.55-1.65	0.60-6.00	0.02-0.10	0.0-2.9	0.0-0.5	.10	.17			
	34-60	1-6	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
127E:												
Amery-----	0-3	4-12	1.05-1.25	0.60-2.00	0.12-0.14	0.0-2.9	1.0-3.0	.24	.24	5	3	86
	3-22	4-15	1.50-1.70	0.60-2.00	0.09-0.19	0.0-2.9	0.0-0.5	.24	.24			
	22-34	4-14	1.65-1.90	0.20-0.60	0.07-0.16	0.0-2.9	0.0-0.5	.24	.24			
	34-41	4-15	1.65-1.90	0.20-0.60	0.07-0.16	0.0-2.9	0.0-0.5	.24	.24			
	41-57	6-17	1.65-1.90	0.20-0.60	0.07-0.16	0.0-2.9	0.0-0.5	.20	.28			
	57-71	6-17	1.65-1.90	0.20-0.60	0.07-0.16	0.0-2.9	0.0-0.5	.20	.28			
	71-80	4-15	1.80-2.00	0.02-0.20	0.02-0.05	0.0-2.9	0.0-0.5	.28	.28			
Rosholt-----	0-4	4-10	1.50-1.60	0.60-6.00	0.12-0.14	0.0-2.9	1.0-3.0	.24	.24	4	3	86
	4-10	3-12	1.70-1.80	0.60-6.00	0.05-0.16	0.0-2.9	0.0-1.0	.24	.24			
	10-14	5-14	1.70-1.80	0.60-6.00	0.05-0.16	0.0-2.9	0.0-1.0	.24	.24			
	14-28	6-15	1.65-1.75	0.60-6.00	0.06-0.19	0.0-2.9	0.0-0.5	.24	.24			
	28-34	4-12	1.55-1.65	0.60-6.00	0.02-0.10	0.0-2.9	0.0-0.5	.10	.17			
	34-60	1-6	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
156B:												
Magnor, very stony----	0-4	7-15	1.35-1.55	0.60-2.00	0.18-0.24	0.0-2.9	1.0-3.0	.37	.37	4	8	0
	4-11	5-13	1.55-1.65	0.60-2.00	0.17-0.22	0.0-2.9	0.0-1.0	.43	.43			
	11-16	6-14	1.55-1.65	0.60-2.00	0.17-0.22	0.0-2.9	0.0-0.5	.43	.43			
	16-21	7-15	1.55-1.65	0.60-2.00	0.17-0.22	0.0-2.9	0.0-0.5	.43	.43			
	21-39	7-17	1.65-1.90	0.06-0.60	0.08-0.18	0.0-2.9	0.0-0.5	.28	.28			
	39-58	7-17	1.65-1.90	0.06-0.60	0.08-0.18	0.0-2.9	0.0-0.5	.28	.28			
	58-60	3-14	1.80-2.00	0.01-0.06	0.00-0.04	0.0-2.9	0.0-0.5	.28	.28			
Magnor-----	0-8	7-17	1.35-1.55	0.60-2.00	0.18-0.24	0.0-2.9	1.0-3.0	.37	.37	4	5	56
	8-11	5-13	1.55-1.65	0.60-2.00	0.17-0.22	0.0-2.9	0.0-1.0	.43	.43			
	11-16	6-14	1.55-1.65	0.60-2.00	0.17-0.22	0.0-2.9	0.0-0.5	.43	.43			
	16-21	7-15	1.55-1.65	0.60-2.00	0.17-0.22	0.0-2.9	0.0-0.5	.43	.43			
	21-39	7-17	1.65-1.90	0.06-0.60	0.08-0.18	0.0-2.9	0.0-0.5	.28	.28			
	39-58	7-17	1.65-1.90	0.06-0.60	0.08-0.18	0.0-2.9	0.0-0.5	.28	.28			
	58-60	3-14	1.80-2.00	0.01-0.06	0.00-0.04	0.0-2.9	0.0-0.5	.28	.28			
157B:												
Freeon, very stony----	0-4	7-17	1.35-1.55	0.60-2.00	0.18-0.24	0.0-2.9	1.0-3.0	.37	.37	4	8	0
	4-19	5-17	1.30-1.60	0.60-2.00	0.18-0.22	0.0-2.9	0.1-1.0	.43	.43			
	19-39	7-17	1.70-1.80	0.06-0.60	0.08-0.18	0.0-2.9	0.0-0.5	.28	.28			
	39-53	3-14	1.65-1.90	0.06-0.60	0.08-0.18	0.0-2.9	0.0-0.5	.28	.28			
	53-80	3-14	1.80-2.00	0.01-0.06	0.08-0.18	0.0-2.9	0.0-0.5	.28	.28			
Freeon-----	0-4	7-17	1.35-1.55	0.60-2.00	0.18-0.24	0.0-2.9	1.0-3.0	.37	.37	4	5	56
	4-19	5-17	1.30-1.60	0.60-2.00	0.18-0.22	0.0-2.9	0.1-1.0	.43	.43			
	19-39	7-17	1.70-1.80	0.06-0.60	0.08-0.18	0.0-2.9	0.0-0.5	.28	.28			
	39-53	3-14	1.65-1.90	0.06-0.60	0.08-0.18	0.0-2.9	0.0-0.5	.28	.28			
	53-80	3-14	1.80-2.00	0.01-0.06	0.08-0.18	0.0-2.9	0.0-0.5	.28	.28			

Table 24.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
157C:												
Freeon, very stony----	0-4	7-17	1.35-1.55	0.60-2.00	0.18-0.24	0.0-2.9	1.0-3.0	.37	.37	4	8	0
	4-19	5-17	1.30-1.60	0.60-2.00	0.18-0.22	0.0-2.9	0.1-1.0	.43	.43			
	19-39	7-17	1.70-1.80	0.06-0.60	0.08-0.18	0.0-2.9	0.0-0.5	.28	.28			
	39-53	3-14	1.65-1.90	0.06-0.60	0.08-0.18	0.0-2.9	0.0-0.5	.28	.28			
	53-80	3-14	1.80-2.00	0.01-0.06	0.08-0.18	0.0-2.9	0.0-0.5	.28	.28			
Freeon-----	0-4	7-17	1.35-1.55	0.60-2.00	0.18-0.24	0.0-2.9	1.0-3.0	.37	.37	4	5	56
	4-19	5-17	1.30-1.60	0.60-2.00	0.18-0.22	0.0-2.9	0.1-1.0	.43	.43			
	19-39	7-17	1.70-1.80	0.06-0.60	0.08-0.18	0.0-2.9	0.0-0.5	.28	.28			
	39-53	3-14	1.65-1.90	0.06-0.60	0.08-0.18	0.0-2.9	0.0-0.5	.28	.28			
	53-80	3-14	1.80-2.00	0.01-0.06	0.08-0.18	0.0-2.9	0.0-0.5	.28	.28			
160A:												
Oesterle-----	0-7	8-15	1.40-1.70	0.60-6.00	0.12-0.14	0.0-2.9	2.0-3.0	.20	.20	4	3	86
	7-11	8-15	1.40-1.70	0.60-6.00	0.10-0.19	0.0-2.9	0.5-1.0	.24	.24			
	11-31	7-17	1.40-1.70	0.60-6.00	0.08-0.19	0.0-2.9	0.0-0.5	.24	.24			
	31-60	1-6	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
182B:												
Padus-----	0-2	3-15	1.35-1.70	0.60-2.00	0.10-0.18	0.0-2.9	1.0-3.0	.24	.24	4	3	86
	2-3	3-13	1.40-1.70	0.60-2.00	0.09-0.19	0.0-2.9	0.5-1.0	.24	.24			
	3-19	5-15	1.40-1.70	0.60-2.00	0.09-0.19	0.0-2.9	1.0-2.0	.24	.24			
	19-26	5-15	1.40-1.70	0.60-2.00	0.06-0.19	0.0-2.9	0.0-0.5	.24	.24			
	26-38	7-17	1.40-1.70	0.60-2.00	0.06-0.19	0.0-2.9	0.0-0.5	.24	.24			
	38-60	0-5	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
182C:												
Padus-----	0-2	3-15	1.35-1.70	0.60-2.00	0.10-0.18	0.0-2.9	1.0-3.0	.24	.24	4	3	86
	2-3	3-13	1.40-1.70	0.60-2.00	0.09-0.19	0.0-2.9	0.5-1.0	.24	.24			
	3-19	5-15	1.40-1.70	0.60-2.00	0.09-0.19	0.0-2.9	1.0-2.0	.24	.24			
	19-26	5-15	1.40-1.70	0.60-2.00	0.06-0.19	0.0-2.9	0.0-0.5	.24	.24			
	26-38	7-17	1.40-1.70	0.60-2.00	0.06-0.19	0.0-2.9	0.0-0.5	.24	.24			
	38-60	0-5	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
192A:												
Worcester-----	0-2	3-15	1.35-1.70	0.60-2.00	0.10-0.18	0.0-2.9	1.0-3.0	.24	.24	4	3	86
	2-3	3-13	1.40-1.70	0.60-2.00	0.06-0.19	0.0-2.9	0.0-2.0	.24	.24			
	3-6	5-15	1.40-1.70	0.60-2.00	0.06-0.19	0.0-2.9	0.0-2.0	.24	.24			
	6-16	5-15	1.40-1.70	0.60-2.00	0.06-0.19	0.0-2.9	0.0-2.0	.24	.24			
	16-20	7-17	1.40-1.70	0.60-2.00	0.06-0.19	0.0-2.9	0.0-0.5	.24	.24			
	20-32	8-18	1.40-1.70	0.60-2.00	0.06-0.19	0.0-2.9	0.0-0.5	.24	.24			
	32-39	3-8	1.45-1.70	6.00-20	0.02-0.11	0.0-2.9	0.0-0.5	.10	.17			
	39-60	1-6	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
193A:												
Minocqua-----	0-4	0-0	0.15-0.45	2.00-6.00	0.35-0.45	---	30-60	.02	.02	4	8	0
	4-15	10-17	1.50-1.60	0.60-2.00	0.11-0.19	0.0-2.9	0.0-2.0	.37	.37			
	15-28	7-17	1.40-1.70	0.60-2.00	0.06-0.19	0.0-2.9	0.0-0.5	.32	.32			
	28-60	0-5	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
215B:												
Pence-----	0-3	3-15	1.30-1.70	2.00-6.00	0.11-0.15	0.0-2.9	1.0-3.0	.24	.24	3	3	86
	3-8	3-13	1.35-1.65	0.60-6.00	0.11-0.18	0.0-2.9	0.5-1.0	.24	.24			
	8-15	5-15	1.35-1.45	0.60-6.00	0.10-0.15	0.0-2.9	1.0-2.0	.17	.24			
	15-21	0-6	1.65-1.75	2.00-60	0.05-0.08	0.0-2.9	0.0-0.5	.05	.10			
	21-60	0-5	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			

Table 24.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
215C:												
Pence-----	0-3	3-15	1.30-1.70	2.00-6.00	0.11-0.15	0.0-2.9	1.0-3.0	.24	.24	3	3	86
	3-8	3-13	1.35-1.65	0.60-6.00	0.11-0.18	0.0-2.9	0.5-1.0	.24	.24			
	8-15	5-15	1.35-1.45	0.60-6.00	0.10-0.15	0.0-2.9	1.0-2.0	.17	.24			
	15-21	0-6	1.65-1.75	2.00-60	0.05-0.08	0.0-2.9	0.0-0.5	.05	.10			
	21-60	0-5	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
215D:												
Pence-----	0-3	3-15	1.30-1.70	2.00-6.00	0.11-0.15	0.0-2.9	1.0-3.0	.24	.24	3	3	86
	3-8	3-13	1.35-1.65	0.60-6.00	0.11-0.18	0.0-2.9	0.5-1.0	.24	.24			
	8-15	5-15	1.35-1.45	0.60-6.00	0.10-0.15	0.0-2.9	1.0-2.0	.17	.24			
	15-21	0-6	1.65-1.75	2.00-60	0.05-0.08	0.0-2.9	0.0-0.5	.05	.10			
	21-60	0-5	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
315A:												
Rib-----	0-7	10-20	1.25-1.35	0.60-2.00	0.22-0.28	0.0-2.9	3.0-10	.32	.32	4	5	56
	7-10	10-15	1.45-1.55	0.60-2.00	0.18-0.22	0.0-2.9	0.0-1.0	.43	.43			
	10-32	18-30	1.45-1.55	0.60-2.00	0.18-0.22	3.0-5.9	0.5-1.0	.43	.43			
	32-35	5-25	1.45-1.75	0.60-2.00	0.10-0.19	0.0-2.9	0.0-0.5	.32	.32			
	35-37	2-10	1.65-1.75	2.00-6.00	0.05-0.08	0.0-2.9	0.0-0.5	.10	.15			
	37-60	0-5	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
337A:												
Plover-----	0-10	3-8	1.35-1.65	0.60-2.00	0.13-0.18	0.0-2.9	2.0-3.0	.28	.28	5	3	86
	10-13	5-15	1.40-1.70	0.60-2.00	0.15-0.19	0.0-2.9	0.5-1.0	.24	.24			
	13-18	5-18	1.40-1.70	0.60-2.00	0.15-0.19	0.0-2.9	0.5-1.0	.24	.24			
	18-32	10-18	1.50-1.70	0.60-2.00	0.12-0.17	0.0-2.9	0.5-1.0	.24	.24			
	32-60	5-12	1.50-1.70	0.20-0.60	0.11-0.22	0.0-2.9	0.0-0.5	.24	.24			
368B:												
Mahtomedi-----	0-5	2-15	1.40-1.60	6.00-20	0.09-0.11	0.0-2.9	0.5-1.0	.10	.10	5	2	134
	5-8	0-10	1.40-1.50	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.10	.10			
	8-15	0-10	1.45-1.75	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.05	.10			
	15-30	0-10	1.45-1.75	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.05	.10			
	30-60	0-10	1.45-1.75	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.05	.10			
Cress-----	0-3	5-18	1.25-1.60	0.60-2.00	0.12-0.14	0.0-2.9	0.5-2.0	.24	.24	3	3	86
	3-15	5-18	1.40-1.70	0.60-2.00	0.12-0.17	0.0-2.9	0.5-1.0	.24	.24			
	15-31	0-8	1.50-1.80	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.17	.17			
	31-36	0-8	1.50-1.80	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.17	.17			
	36-60	1-6	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
368C:												
Mahtomedi-----	0-5	2-15	1.40-1.60	6.00-20	0.09-0.11	0.0-2.9	0.5-1.0	.10	.10	5	2	134
	5-8	0-10	1.40-1.50	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.10	.10			
	8-15	0-10	1.45-1.75	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.05	.10			
	15-30	0-10	1.45-1.75	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.05	.10			
	30-60	0-10	1.45-1.75	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.05	.10			
Cress-----	0-3	5-18	1.25-1.60	0.60-2.00	0.12-0.14	0.0-2.9	0.5-2.0	.24	.24	3	3	86
	3-15	5-18	1.40-1.70	0.60-2.00	0.12-0.17	0.0-2.9	0.5-1.0	.24	.24			
	15-31	0-8	1.50-1.80	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.17	.17			
	31-36	0-8	1.50-1.80	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.17	.17			
	36-60	1-6	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
368D:												
Mahtomedi-----	0-5	2-15	1.40-1.60	6.00-20	0.09-0.11	0.0-2.9	0.5-1.0	.10	.10	5	2	134
	5-8	0-10	1.40-1.50	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.10	.10			
	8-15	0-10	1.45-1.75	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.05	.10			
	15-30	0-10	1.45-1.75	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.05	.10			
	30-60	0-10	1.45-1.75	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.05	.10			

Table 24.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
368D: Cress-----	0-3	5-18	1.25-1.60	0.60-2.00	0.12-0.14	0.0-2.9	0.5-2.0	.24	.24	3	3	86
	3-15	5-18	1.40-1.70	0.60-2.00	0.12-0.17	0.0-2.9	0.5-1.0	.24	.24			
	15-31	0-8	1.50-1.80	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.17	.17			
	31-36	0-8	1.50-1.80	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.17	.17			
	36-60	1-6	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
371A: Croswell-----	0-1	2-10	1.35-1.65	6.00-20	0.06-0.11	0.0-2.9	1.0-3.0	.10	.10	5	2	134
	1-7	0-10	1.30-1.50	6.00-20	0.06-0.11	0.0-2.9	0.5-2.0	.10	.10			
	7-16	0-10	1.40-1.60	6.00-20	0.06-0.11	0.0-2.9	0.6-1.0	.10	.10			
	16-39	0-10	1.40-1.60	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.02	.02			
	39-60	0-5	1.50-1.65	6.00-20	0.05-0.07	0.0-2.9	0.0-0.5	.02	.02			
380B: Cress-----	0-3	5-18	1.25-1.60	0.60-2.00	0.12-0.14	0.0-2.9	0.5-2.0	.24	.24	3	3	86
	3-15	5-18	1.40-1.70	0.60-2.00	0.12-0.17	0.0-2.9	0.5-1.0	.24	.24			
	15-31	0-8	1.50-1.80	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.17	.17			
	31-36	0-8	1.50-1.80	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.17	.17			
	36-60	1-6	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
Rosholt-----	0-8	4-10	1.50-1.60	0.60-6.00	0.12-0.14	0.0-2.9	1.0-3.0	.24	.24	4	3	86
	8-10	3-12	1.70-1.80	0.60-6.00	0.05-0.16	0.0-2.9	0.0-1.0	.24	.24			
	10-14	5-14	1.70-1.80	0.60-6.00	0.05-0.16	0.0-2.9	0.0-1.0	.24	.24			
	14-28	6-15	1.65-1.75	0.60-6.00	0.06-0.19	0.0-2.9	0.0-0.5	.24	.24			
	28-34	4-12	1.55-1.65	0.60-6.00	0.02-0.10	0.0-2.9	0.0-0.5	.10	.17			
	34-60	1-6	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
380C: Cress-----	0-3	5-18	1.25-1.60	0.60-2.00	0.12-0.14	0.0-2.9	0.5-2.0	.24	.24	3	3	86
	3-15	5-18	1.40-1.70	0.60-2.00	0.12-0.17	0.0-2.9	0.5-1.0	.24	.24			
	15-31	0-8	1.50-1.80	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.17	.17			
	31-36	0-8	1.50-1.80	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.17	.17			
	36-60	1-6	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
Rosholt-----	0-8	4-10	1.50-1.60	0.60-6.00	0.12-0.14	0.0-2.9	1.0-3.0	.24	.24	4	3	86
	8-10	3-12	1.70-1.80	0.60-6.00	0.05-0.16	0.0-2.9	0.0-1.0	.24	.24			
	10-14	5-14	1.70-1.80	0.60-6.00	0.05-0.16	0.0-2.9	0.0-1.0	.24	.24			
	14-28	6-15	1.65-1.75	0.60-6.00	0.06-0.19	0.0-2.9	0.0-0.5	.24	.24			
	28-34	4-12	1.55-1.65	0.60-6.00	0.02-0.10	0.0-2.9	0.0-0.5	.10	.17			
	34-60	1-6	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
380D: Cress-----	0-3	5-18	1.25-1.60	0.60-2.00	0.12-0.14	0.0-2.9	0.5-2.0	.24	.24	3	3	86
	3-15	5-18	1.40-1.70	0.60-2.00	0.12-0.17	0.0-2.9	0.5-1.0	.24	.24			
	15-31	0-8	1.50-1.80	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.17	.17			
	31-36	0-8	1.50-1.80	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.17	.17			
	36-60	1-6	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
Rosholt-----	0-8	4-10	1.50-1.60	0.60-6.00	0.12-0.14	0.0-2.9	1.0-3.0	.24	.24	4	3	86
	8-10	3-12	1.70-1.80	0.60-6.00	0.05-0.16	0.0-2.9	0.0-1.0	.24	.24			
	10-14	5-14	1.70-1.80	0.60-6.00	0.05-0.16	0.0-2.9	0.0-1.0	.24	.24			
	14-28	6-15	1.65-1.75	0.60-6.00	0.06-0.19	0.0-2.9	0.0-0.5	.24	.24			
	28-34	4-12	1.55-1.65	0.60-6.00	0.02-0.10	0.0-2.9	0.0-0.5	.10	.17			
	34-60	1-6	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
383B: Mahtomedi-----	0-5	2-15	1.40-1.60	6.00-20	0.09-0.11	0.0-2.9	0.5-1.0	.10	.10	5	2	134
	5-8	0-10	1.40-1.50	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.10	.10			
	8-15	0-10	1.45-1.75	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.05	.10			
	15-30	0-10	1.45-1.75	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.05	.10			
	30-60	0-10	1.45-1.75	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.05	.10			

Table 24.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
383C:												
Mahtomedi-----	0-5	2-15	1.40-1.60	6.00-20	0.09-0.11	0.0-2.9	0.5-1.0	.10	.10	5	2	134
	5-8	0-10	1.40-1.50	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.10	.10			
	8-15	0-10	1.45-1.75	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.05	.10			
	15-30	0-10	1.45-1.75	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.05	.10			
	30-60	0-10	1.45-1.75	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.05	.10			
383D:												
Mahtomedi-----	0-5	2-15	1.40-1.60	6.00-20	0.09-0.11	0.0-2.9	0.5-1.0	.10	.10	5	2	134
	5-8	0-10	1.40-1.50	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.10	.10			
	8-15	0-10	1.45-1.75	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.05	.10			
	15-30	0-10	1.45-1.75	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.05	.10			
	30-60	0-10	1.45-1.75	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.05	.10			
396B:												
Friendship-----	0-4	2-6	1.50-1.65	6.00-20	0.06-0.08	0.0-2.9	0.5-2.0	.02	.02	5	1	220
	4-29	2-7	1.35-1.65	6.00-20	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
	29-60	0-4	1.50-1.70	6.00-20	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
Wurtsmith-----	0-6	0-10	1.30-1.65	6.00-20	0.07-0.09	0.0-2.9	1.0-6.0	.02	.02	5	1	220
	6-33	0-5	1.40-1.60	6.00-20	0.06-0.07	0.0-2.9	0.0-0.5	.15	.15			
	33-60	0-5	1.50-1.65	6.00-20	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
Grayling-----	0-3	0-10	1.30-1.65	6.00-20	0.07-0.09	0.0-2.9	1.0-6.0	.02	.02	5	1	220
	3-15	0-10	1.30-1.65	6.00-20	0.05-0.07	0.0-2.9	0.3-0.5	.15	.15			
	15-23	0-10	1.45-1.65	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.15	.15			
	23-60	0-10	1.45-1.65	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.15	.15			
397A:												
Perchlake-----	0-9	2-10	1.40-1.50	6.00-20	0.10-0.12	0.0-2.9	0.5-2.0	.10	.10	5	2	134
	9-18	2-8	1.50-1.70	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
	18-42	2-8	1.40-1.65	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
	42-46	10-18	1.50-1.70	6.00-20	0.11-0.19	0.0-2.9	0.0-0.5	.24	.24			
	46-60	2-8	1.50-1.65	6.00-20	0.05-0.09	0.0-2.9	0.0-0.5	.15	.15			
399B:												
Grayling-----	0-3	0-10	1.30-1.65	6.00-20	0.07-0.09	0.0-2.9	1.0-6.0	.02	.02	5	1	220
	3-15	0-10	1.30-1.65	6.00-20	0.05-0.07	0.0-2.9	0.3-0.5	.15	.15			
	15-23	0-10	1.45-1.65	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.15	.15			
	23-60	0-10	1.45-1.65	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.15	.15			
399C:												
Grayling-----	0-3	0-10	1.30-1.65	6.00-20	0.07-0.09	0.0-2.9	1.0-6.0	.02	.02	5	1	220
	3-15	0-10	1.30-1.65	6.00-20	0.05-0.07	0.0-2.9	0.3-0.5	.15	.15			
	15-23	0-10	1.45-1.65	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.15	.15			
	23-60	0-10	1.45-1.65	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.15	.15			
399D:												
Grayling-----	0-3	0-10	1.30-1.65	6.00-20	0.07-0.09	0.0-2.9	1.0-6.0	.02	.02	5	1	220
	3-15	0-10	1.30-1.65	6.00-20	0.05-0.07	0.0-2.9	0.3-0.5	.15	.15			
	15-23	0-10	1.45-1.65	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.15	.15			
	23-60	0-10	1.45-1.65	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.15	.15			
405A:												
Lupton-----	0-65	0-0	0.10-0.35	0.20-6.00	0.35-0.45	---	70-90	.02	.02	3	8	0
Cathro-----	0-28	0-0	0.28-0.45	0.20-6.00	0.35-0.45	---	60-85	.02	.02	2	8	0
	28-49	10-30	1.50-1.70	0.20-2.00	0.11-0.22	0.0-2.9	0.0-0.5	.28	.28			
	49-60	10-30	1.50-1.70	0.20-2.00	0.11-0.22	0.0-2.9	0.0-0.5	.28	.28			
Tawas-----	0-31	0-0	0.15-0.40	0.20-6.00	0.35-0.45	---	30-80	.02	.02	2	8	0
	31-60	0-10	1.55-1.80	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.15	.15			

Table 24.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
406A:												
Loxley-----	0-13	0-0	0.30-0.40	6.00-20	0.45-0.55	---	70-90	.02	.02	3	8	0
	13-60	0-0	0.10-0.35	0.20-6.00	0.35-0.45	---	70-90	.02	.02			
407A:												
Seelyeville-----	0-80	0-0	0.10-0.25	0.20-6.00	0.35-0.45	---	25-99	.02	.02	3	8	0
Markey-----	0-32	0-0	0.15-0.45	0.20-6.00	0.35-0.45	---	55-85	.02	.02	2	8	0
	32-60	0-10	1.40-1.65	6.00-20	0.03-0.10	0.0-2.9	0.0-0.5	.10	.15			
410A:												
Seelyeville-----	0-80	0-0	0.10-0.25	0.20-6.00	0.35-0.45	---	25-99	.02	.02	3	8	0
Cathro-----	0-28	0-0	0.28-0.45	0.20-6.00	0.35-0.45	---	60-85	.02	.02	2	8	0
	28-49	10-30	1.50-1.70	0.20-2.00	0.11-0.22	0.0-2.9	0.0-0.5	.28	.28			
	49-60	10-30	1.50-1.70	0.20-2.00	0.11-0.22	0.0-2.9	0.0-0.5	.28	.28			
412A:												
Rifle-----	0-4	0-0	0.20-0.35	2.00-6.00	0.55-0.65	---	70-90	.02	.02	5	7	38
	4-60	0-0	0.08-0.20	2.00-6.00	0.45-0.55	---	70-90	.02	.02			
Tacoosh-----	0-8	0-0	0.10-0.30	0.20-6.00	0.35-0.45	---	75-99	.02	.02	2	8	0
	8-40	0-0	0.10-0.20	0.60-6.00	0.45-0.55	---	75-99	.02	.02			
	40-42	10-18	1.50-1.70	0.60-2.00	0.11-0.19	0.0-2.9	0.5-1.0	.24	.24			
	42-60	10-18	1.50-1.70	0.60-2.00	0.11-0.19	0.0-2.9	0.5-1.0	.24	.24			
415A:												
Greenwood-----	0-60	0-0	0.10-0.35	0.20-6.00	0.35-0.45	---	70-90	.02	.02	3	8	0
439B:												
Graycalm-----	0-3	2-10	1.30-1.55	6.00-20	0.09-0.11	0.0-2.9	0.5-2.0	.10	.10	5	2	134
	3-22	0-10	1.25-1.60	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.10	.15			
	22-35	0-10	1.50-1.65	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.10	.15			
	35-60	0-15	1.50-1.65	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.10	.15			
Menahga-----	0-1	0-0	0.15-0.30	6.00-20	0.55-0.65	---	65-85	.02	.02	5	2	134
	1-2	2-10	1.30-1.55	6.00-20	0.09-0.11	0.0-2.9	0.5-2.0	.10	.10			
	2-25	0-15	1.25-1.60	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.10	.15			
	25-80	0-10	1.50-1.65	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.10	.15			
439C:												
Graycalm-----	0-3	2-10	1.30-1.55	6.00-20	0.09-0.11	0.0-2.9	0.5-2.0	.10	.10	5	2	134
	3-22	0-10	1.25-1.60	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.10	.15			
	22-35	0-10	1.50-1.65	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.10	.15			
	35-60	0-15	1.50-1.65	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.10	.15			
Menahga-----	0-1	0-0	0.15-0.30	6.00-20	0.55-0.65	---	65-85	.02	.02	5	2	134
	1-2	2-10	1.30-1.55	6.00-20	0.09-0.11	0.0-2.9	0.5-2.0	.10	.10			
	2-25	0-15	1.25-1.60	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.10	.15			
	25-80	0-10	1.50-1.65	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.10	.15			
439D:												
Graycalm-----	0-3	2-10	1.30-1.55	6.00-20	0.09-0.11	0.0-2.9	0.5-2.0	.10	.10	5	2	134
	3-22	0-10	1.25-1.60	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.10	.15			
	22-35	0-10	1.50-1.65	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.10	.15			
	35-60	0-15	1.50-1.65	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.10	.15			
Menahga-----	0-1	0-0	0.15-0.30	6.00-20	0.55-0.65	---	65-85	.02	.02	5	2	134
	1-2	2-10	1.30-1.55	6.00-20	0.09-0.11	0.0-2.9	0.5-2.0	.10	.10			
	2-25	0-15	1.25-1.60	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.10	.15			
	25-80	0-10	1.50-1.65	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.10	.15			



Table 24.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
441C:												
Freeon-----	0-4	7-17	1.35-1.55	0.60-2.00	0.18-0.24	0.0-2.9	1.0-3.0	.37	.37	4	8	0
	4-19	5-17	1.30-1.60	0.60-2.00	0.18-0.22	0.0-2.9	0.1-1.0	.43	.43			
	19-39	7-17	1.70-1.80	0.06-0.60	0.08-0.18	0.0-2.9	0.0-0.5	.28	.28			
	39-53	3-14	1.65-1.90	0.06-0.60	0.08-0.18	0.0-2.9	0.0-0.5	.28	.28			
	53-80	3-14	1.80-2.00	0.01-0.06	0.08-0.18	0.0-2.9	0.0-0.5	.28	.28			
Cathro-----	0-28	---	0.28-0.45	0.20-6.00	0.35-0.45	---	60-85	---	---	2	2	134
	28-49	10-30	1.50-1.70	0.20-2.00	0.11-0.22	0.0-2.9	0.0-0.5	.28	.28			
	49-60	10-30	1.50-1.70	0.20-2.00	0.11-0.22	0.0-2.9	0.0-0.5	.28	.28			
442C:												
Haugen-----	0-4	6-14	1.40-1.65	0.60-2.00	0.12-0.14	0.0-2.9	1.0-3.0	.24	.24	5	3	86
	4-15	4-14	1.40-1.70	0.60-2.00	0.08-0.19	0.0-2.9	0.5-1.0	.24	.24			
	15-23	4-14	1.40-1.70	0.60-2.00	0.08-0.19	0.0-2.9	0.5-1.0	.24	.24			
	23-35	5-15	1.40-1.70	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.5	.24	.24			
	35-49	6-16	1.40-1.70	0.20-0.60	0.05-0.13	0.0-2.9	0.0-0.5	.24	.24			
	49-79	8-18	1.40-1.70	0.20-0.60	0.05-0.13	0.0-2.9	0.0-0.5	.24	.24			
	79-80	6-15	1.80-1.90	0.01-0.06	0.02-0.05	0.0-2.9	0.0-0.5	.24	.24			
Greenwood-----	0-6	0-0	0.30-0.40	6.00-20	0.55-0.65	---	55-75	.02	.02	3	7	38
	6-60	0-0	0.10-0.25	0.60-6.00	0.45-0.55	---	55-75	.02	.02			
443D:												
Amery-----	0-3	4-12	1.05-1.25	0.60-2.00	0.12-0.14	0.0-2.9	1.0-3.0	.24	.24	5	3	86
	3-22	4-15	1.50-1.70	0.60-2.00	0.09-0.19	0.0-2.9	0.0-0.5	.24	.24			
	22-34	4-14	1.65-1.90	0.20-0.60	0.07-0.16	0.0-2.9	0.0-0.5	.24	.24			
	34-41	4-15	1.65-1.90	0.20-0.60	0.07-0.16	0.0-2.9	0.0-0.5	.24	.24			
	41-57	6-17	1.65-1.90	0.20-0.60	0.07-0.16	0.0-2.9	0.0-0.5	.20	.28			
	57-71	6-17	1.65-1.90	0.20-0.60	0.07-0.16	0.0-2.9	0.0-0.5	.20	.28			
	71-80	4-15	1.80-2.00	0.02-0.20	0.02-0.05	0.0-2.9	0.0-0.5	.28	.28			
Greenwood-----	0-6	0-0	0.30-0.40	6.00-20	0.55-0.65	---	55-75	.02	.02	3	7	38
	6-60	0-0	0.10-0.25	0.60-6.00	0.45-0.55	---	55-75	.02	.02			
461A:												
Bowstring-----	0-38	0-0	0.10-0.35	0.20-6.00	0.35-0.45	---	70-90	.02	.02	3	8	0
	38-47	0-10	1.40-1.65	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.10	.15			
	47-80	0-0	0.10-0.35	0.20-6.00	0.35-0.45	---	70-90	.02	.02			
484A:												
Greenwood-----	0-6	0-0	0.30-0.40	6.00-20	0.55-0.65	---	55-75	.02	.02	3	7	38
	6-60	0-0	0.10-0.25	0.60-6.00	0.45-0.55	---	55-75	.02	.02			
Beseman-----	0-36	0-0	0.10-0.25	0.60-6.00	0.35-0.45	---	25-75	.02	.02	2	8	0
	36-60	8-20	1.35-1.60	0.20-0.60	0.09-0.22	0.0-2.9	0.5-1.0	.43	.43			
495B:												
Karlsborg-----	0-9	6-8	1.35-1.65	6.00-20	0.09-0.11	0.0-2.9	0.5-2.0	.10	.10	4	2	134
	9-28	0-8	1.45-1.65	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
	28-48	60-80	1.45-1.70	0.01-0.20	0.08-0.10	6.0-8.9	0.0-0.5	.28	.28			
	48-80	1-5	1.55-1.70	6.00-20	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
Grettum-----	0-3	2-12	1.35-1.60	6.00-20	0.09-0.11	0.0-2.9	1.0-3.0	.10	.10	5	2	134
	3-32	2-12	1.40-1.65	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
	32-75	2-12	1.40-1.65	2.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
	75-80	1-10	1.50-1.70	6.00-20	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			

Table 24.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
495B: Perida-----	0-9	6-8	1.35-1.65	6.00-20	0.09-0.11	0.0-2.9	0.5-2.0	.10	.10	4	2	134
	9-43	0-8	1.45-1.65	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
	43-45	2-8	1.45-1.65	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
	45-60	50-80	1.45-1.70	0.01-0.06	0.08-0.10	6.0-8.9	0.0-0.5	.28	.28			
	60-74	50-80	1.45-1.70	0.01-0.06	0.08-0.10	6.0-8.9	0.0-0.5	.28	.28			
	74-80	1-10	1.50-1.70	6.00-20	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
495C: Karlsborg-----	0-9	6-8	1.35-1.65	6.00-20	0.09-0.11	0.0-2.9	0.5-2.0	.10	.10	4	2	134
	9-28	0-8	1.45-1.65	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
	28-48	60-80	1.45-1.70	0.01-0.20	0.08-0.10	6.0-8.9	0.0-0.5	.28	.28			
	48-80	1-5	1.55-1.70	6.00-20	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
Grettum-----	0-3	2-12	1.35-1.60	6.00-20	0.09-0.11	0.0-2.9	1.0-3.0	.10	.10	5	2	134
	3-32	2-12	1.40-1.65	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
	32-75	2-12	1.40-1.65	2.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
	75-80	1-10	1.50-1.70	6.00-20	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
Perida-----	0-9	6-8	1.35-1.65	6.00-20	0.09-0.11	0.0-2.9	0.5-2.0	.10	.10	4	2	134
	9-43	0-8	1.45-1.65	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
	43-45	2-8	1.45-1.65	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
	45-60	50-80	1.45-1.70	0.01-0.06	0.08-0.10	6.0-8.9	0.0-0.5	.28	.28			
	60-74	50-80	1.45-1.70	0.01-0.06	0.08-0.10	6.0-8.9	0.0-0.5	.28	.28			
	74-80	1-10	1.50-1.70	6.00-20	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
495D: Karlsborg-----	0-9	6-8	1.35-1.65	6.00-20	0.09-0.11	0.0-2.9	0.5-2.0	.10	.10	4	2	134
	9-28	0-8	1.45-1.65	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
	28-48	60-80	1.45-1.70	0.01-0.20	0.08-0.10	6.0-8.9	0.0-0.5	.28	.28			
	48-80	1-5	1.55-1.70	6.00-20	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
Grettum-----	0-3	2-12	1.35-1.60	6.00-20	0.09-0.11	0.0-2.9	1.0-3.0	.10	.10	5	2	134
	3-32	2-12	1.40-1.65	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
	32-75	2-12	1.40-1.65	2.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
	75-80	1-10	1.50-1.70	6.00-20	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
Perida-----	0-9	6-8	1.35-1.65	6.00-20	0.09-0.11	0.0-2.9	0.5-2.0	.10	.10	4	2	134
	9-43	0-8	1.45-1.65	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
	43-45	2-8	1.45-1.65	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
	45-60	50-80	1.45-1.70	0.01-0.06	0.08-0.10	6.0-8.9	0.0-0.5	.28	.28			
	60-74	50-80	1.45-1.70	0.01-0.06	0.08-0.10	6.0-8.9	0.0-0.5	.28	.28			
	74-80	1-10	1.50-1.70	6.00-20	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
497A: Meenon-----	0-9	6-8	1.35-1.65	2.00-20	0.09-0.11	0.0-2.9	0.5-2.0	.10	.10	4	1	250
	9-28	1-7	1.50-1.70	6.00-20	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
	28-41	60-90	1.35-1.60	0.01-0.06	0.08-0.10	6.0-8.9	0.0-0.5	.28	.28			
	41-80	1-7	1.55-1.70	6.00-20	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
515A: Manitowish-----	0-3	3-15	1.30-1.70	2.00-6.00	0.11-0.15	0.0-2.9	1.0-3.0	.24	.24	3	3	86
	3-4	3-13	1.35-1.65	0.60-6.00	0.11-0.18	0.0-2.9	0.5-1.0	.24	.24			
	4-16	5-15	1.40-1.70	0.60-6.00	0.11-0.18	0.0-2.9	1.0-2.0	.24	.24			
	16-19	0-8	1.45-1.65	2.00-60	0.04-0.12	0.0-2.9	1.0-2.0	.15	.15			
	19-60	0-5	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			

Table 24.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
521A: Dody-----	0-3	0-0	0.45-0.85	2.00-6.00	0.35-0.45	---	20-50	.02	.02	4	8	0
	3-9	1-12	1.35-1.60	2.00-6.00	0.06-0.08	0.0-2.9	0.2-1.0	.02	.02			
	9-20	2-12	1.40-1.65	2.00-6.00	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
	20-23	2-12	1.40-1.65	2.00-6.00	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
	23-47	50-80	1.35-1.70	0.01-0.20	0.08-0.12	6.0-8.9	0.0-0.5	.28	.28			
	47-58	2-12	1.40-1.65	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
	58-80	0-12	1.40-1.65	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
524E: Rock outcrop.												
Frogcreek-----	0-4	5-12	1.35-1.55	0.60-2.00	0.20-0.22	0.0-2.9	2.0-4.0	.37	.37	5	5	56
	4-13	5-12	1.45-1.65	0.60-2.00	0.20-0.22	0.0-2.9	1.0-2.0	.37	.37			
	13-19	6-16	1.65-1.85	0.20-0.60	0.07-0.20	0.0-2.9	0.0-0.5	.20	.28			
	19-32	7-18	1.65-1.85	0.20-0.60	0.07-0.19	0.0-2.9	0.0-0.5	.20	.28			
	32-46	7-18	1.65-1.85	0.20-0.60	0.07-0.19	0.0-2.9	0.0-0.5	.20	.28			
	46-80	2-10	1.85-2.00	0.06-0.20	0.02-0.05	0.0-2.9	0.0-0.5	.10	.17			
Metonga-----	0-3	5-12	1.35-1.45	0.60-2.00	0.20-0.22	0.0-2.9	2.0-4.0	.37	.37	2	3	86
	3-4	3-15	1.35-1.70	0.60-2.00	0.17-0.22	0.0-2.9	0.5-1.0	.37	.37			
	4-25	3-15	1.40-1.70	0.60-2.00	0.17-0.22	0.0-2.9	0.0-0.5	.37	.37			
	25-28	3-10	1.40-1.75	0.60-2.00	0.07-0.16	0.0-2.9	0.0-0.5	.24	.24			
	28-80	0-0	---	0.01-20	0.00-0.00	---	---	---	---			
542B: Haugen, very stony----	0-4	6-14	1.40-1.65	0.60-2.00	0.12-0.14	0.0-2.9	1.0-3.0	.24	.24	5	3	86
	4-15	4-14	1.40-1.70	0.60-2.00	0.08-0.19	0.0-2.9	0.5-1.0	.24	.24			
	15-23	4-14	1.40-1.70	0.60-2.00	0.08-0.19	0.0-2.9	0.5-1.0	.24	.24			
	23-35	5-15	1.40-1.70	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.5	.24	.24			
	35-49	6-16	1.40-1.70	0.20-0.60	0.05-0.13	0.0-2.9	0.0-0.5	.24	.24			
	49-79	8-18	1.40-1.70	0.20-0.60	0.05-0.13	0.0-2.9	0.0-0.5	.24	.24			
	79-80	6-15	1.80-1.90	0.01-0.06	0.02-0.05	0.0-2.9	0.0-0.5	.24	.24			
Haugen-----	0-7	6-14	1.40-1.65	0.60-2.00	0.12-0.14	0.0-2.9	1.0-3.0	.24	.24	5	3	86
	7-15	4-14	1.40-1.70	0.60-2.00	0.08-0.19	0.0-2.9	0.5-1.0	.24	.24			
	15-23	4-14	1.40-1.70	0.60-2.00	0.08-0.19	0.0-2.9	0.5-1.0	.24	.24			
	23-35	5-15	1.40-1.70	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.5	.24	.24			
	35-49	6-16	1.40-1.70	0.20-0.60	0.05-0.13	0.0-2.9	0.0-0.5	.24	.24			
	49-79	8-18	1.40-1.70	0.20-0.60	0.05-0.13	0.0-2.9	0.0-0.5	.24	.24			
	79-80	6-15	1.80-1.90	0.01-0.06	0.02-0.05	0.0-2.9	0.0-0.5	.24	.24			
542C: Haugen, very stony----	0-4	6-14	1.40-1.65	0.60-2.00	0.12-0.14	0.0-2.9	1.0-3.0	.24	.24	5	3	86
	4-15	4-14	1.40-1.70	0.60-2.00	0.08-0.19	0.0-2.9	0.5-1.0	.24	.24			
	15-23	4-14	1.40-1.70	0.60-2.00	0.08-0.19	0.0-2.9	0.5-1.0	.24	.24			
	23-35	5-15	1.40-1.70	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.5	.24	.24			
	35-49	6-16	1.40-1.70	0.20-0.60	0.05-0.13	0.0-2.9	0.0-0.5	.24	.24			
	49-79	8-18	1.40-1.70	0.20-0.60	0.05-0.13	0.0-2.9	0.0-0.5	.24	.24			
	79-80	6-15	1.80-1.90	0.01-0.06	0.02-0.05	0.0-2.9	0.0-0.5	.24	.24			
Haugen-----	0-7	6-14	1.40-1.65	0.60-2.00	0.12-0.14	0.0-2.9	1.0-3.0	.24	.24	5	3	86
	7-15	4-14	1.40-1.70	0.60-2.00	0.08-0.19	0.0-2.9	0.5-1.0	.24	.24			
	15-23	4-14	1.40-1.70	0.60-2.00	0.08-0.19	0.0-2.9	0.5-1.0	.24	.24			
	23-35	5-15	1.40-1.70	0.60-2.00	0.05-0.16	0.0-2.9	0.0-0.5	.24	.24			
	35-49	6-16	1.40-1.70	0.20-0.60	0.05-0.13	0.0-2.9	0.0-0.5	.24	.24			
	49-79	8-18	1.40-1.70	0.20-0.60	0.05-0.13	0.0-2.9	0.0-0.5	.24	.24			
	79-80	6-15	1.80-1.90	0.01-0.06	0.02-0.05	0.0-2.9	0.0-0.5	.24	.24			

Table 24.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
<b>543B:</b>												
<b>Anigon-----</b>	0-10	10-20	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.37	.37	4	5	56
	10-14	8-20	1.35-1.55	0.60-2.00	0.20-0.22	0.0-2.9	0.5-1.0	.43	.43			
	14-20	16-25	1.50-1.60	0.60-2.00	0.20-0.22	0.0-2.9	0.0-0.5	.43	.43			
	20-30	18-27	1.50-1.60	0.60-2.00	0.20-0.22	0.0-2.9	0.0-0.5	.43	.43			
	30-34	6-20	1.55-1.75	6.00-20	0.07-0.19	0.0-2.9	0.0-0.5	.24	.24			
	34-60	0-5	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
<b>543C2:</b>												
<b>Anigon-----</b>	0-10	10-20	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.37	.37	4	5	56
	10-14	8-20	1.35-1.55	0.60-2.00	0.20-0.22	0.0-2.9	0.5-1.0	.43	.43			
	14-20	16-25	1.50-1.60	0.60-2.00	0.20-0.22	0.0-2.9	0.0-0.5	.43	.43			
	20-30	18-27	1.50-1.60	0.60-2.00	0.20-0.22	0.0-2.9	0.0-0.5	.43	.43			
	30-34	6-20	1.55-1.75	6.00-20	0.07-0.19	0.0-2.9	0.0-0.5	.24	.24			
	34-60	0-5	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
<b>544F:</b>												
<b>Menahga-----</b>	0-1	0-0	0.15-0.30	6.00-20	0.55-0.65	---	65-85	.02	.02	5	2	134
	1-2	0-8	1.40-1.65	6.00-20	0.06-0.08	0.0-2.9	0.5-2.0	.02	.02			
	2-25	0-15	1.25-1.60	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.10	.15			
	25-80	0-10	1.50-1.65	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.10	.15			
<b>Mahtomedi-----</b>	0-5	2-15	1.40-1.60	6.00-20	0.09-0.11	0.0-2.9	0.5-1.0	.10	.10	5	2	134
	5-8	0-10	1.40-1.50	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.10	.10			
	8-15	0-10	1.45-1.75	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.05	.10			
	15-30	0-10	1.45-1.75	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.05	.10			
	30-60	0-10	1.45-1.75	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.05	.10			
<b>555A:</b>												
<b>Fordum-----</b>	0-6	10-23	1.35-1.45	0.60-2.00	0.17-0.24	0.0-2.9	4.0-12	.32	.32	4	5	56
	6-18	8-17	1.40-1.50	0.60-6.00	0.10-0.22	0.0-2.9	1.0-12	.37	.37			
	18-30	8-17	1.40-1.50	0.60-6.00	0.10-0.22	0.0-2.9	1.0-12	.37	.37			
	30-60	2-5	1.55-1.70	6.00-20	0.04-0.10	0.0-2.9	0.5-1.0	.15	.15			
<b>574B:</b>												
<b>Sayner-----</b>	0-2	2-10	1.25-1.45	2.00-6.00	0.08-0.12	0.0-2.9	1.0-3.0	.10	.10	5	2	134
	2-4	0-10	1.35-1.55	2.00-20	0.04-0.11	0.0-2.9	0.5-1.0	.10	.10			
	4-7	0-10	1.35-1.65	2.00-20	0.03-0.11	0.0-2.9	1.0-2.0	.10	.10			
	7-14	0-10	1.35-1.65	2.00-20	0.03-0.11	0.0-2.9	1.0-2.0	.02	.02			
	14-22	0-10	1.45-1.70	2.00-20	0.03-0.11	0.0-2.9	0.0-0.5	.02	.02			
	22-60	0-5	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
<b>574C:</b>												
<b>Sayner-----</b>	0-2	2-10	1.25-1.45	2.00-6.00	0.08-0.12	0.0-2.9	1.0-3.0	.10	.10	5	2	134
	2-4	0-10	1.35-1.55	2.00-20	0.04-0.11	0.0-2.9	0.5-1.0	.10	.10			
	4-7	0-10	1.35-1.65	2.00-20	0.03-0.11	0.0-2.9	1.0-2.0	.10	.10			
	7-14	0-10	1.35-1.65	2.00-20	0.03-0.11	0.0-2.9	1.0-2.0	.02	.02			
	14-22	0-10	1.45-1.70	2.00-20	0.03-0.11	0.0-2.9	0.0-0.5	.02	.02			
	22-60	0-5	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
<b>574E:</b>												
<b>Sayner-----</b>	0-2	2-10	1.25-1.45	2.00-6.00	0.08-0.12	0.0-2.9	1.0-3.0	.10	.10	5	2	134
	2-4	0-10	1.35-1.55	2.00-20	0.04-0.11	0.0-2.9	0.5-1.0	.10	.10			
	4-7	0-10	1.35-1.65	2.00-20	0.03-0.11	0.0-2.9	1.0-2.0	.10	.10			
	7-14	0-10	1.35-1.65	2.00-20	0.03-0.11	0.0-2.9	1.0-2.0	.02	.02			
	14-22	0-10	1.45-1.70	2.00-20	0.03-0.11	0.0-2.9	0.0-0.5	.02	.02			
	22-60	0-5	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			

Table 24.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
579B:												
Parkfalls-----	0-5	4-15	1.35-1.70	0.60-2.00	0.12-0.14	0.0-2.9	1.0-2.0	.24	.24	4	3	86
	5-8	5-12	1.35-1.70	0.60-2.00	0.09-0.19	0.0-2.9	0.5-2.0	.24	.24			
	8-17	6-14	1.35-1.70	0.60-2.00	0.09-0.19	0.0-2.9	0.5-2.0	.24	.24			
	17-30	7-16	1.65-1.85	0.20-0.60	0.10-0.14	0.0-2.9	0.0-0.5	.20	.28			
	30-33	9-17	1.65-1.85	0.20-0.60	0.10-0.14	0.0-2.9	0.0-0.5	.20	.28			
	33-48	8-16	1.80-2.00	0.20-0.60	0.02-0.04	0.0-2.9	0.0-0.5	.20	.28			
	48-80	2-10	1.85-2.00	0.06-0.20	0.00-0.04	0.0-2.9	0.0-0.5	.28	.28			
600A:												
Haplosaprists-----	---	---	---	---	---	---	---	---	---	2	8	0
Psammaquents-----	---	---	---	---	---	---	---	---	---	2	8	0
615B:												
Cress-----	0-3	5-18	1.25-1.60	0.60-2.00	0.12-0.14	0.0-2.9	0.5-2.0	.24	.24	3	3	86
	3-15	5-18	1.40-1.70	0.60-2.00	0.12-0.17	0.0-2.9	0.5-1.0	.24	.24			
	15-31	0-8	1.50-1.80	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.17	.17			
	31-36	0-8	1.50-1.80	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.17	.17			
	36-60	1-6	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
615C:												
Cress-----	0-3	5-18	1.25-1.60	0.60-2.00	0.12-0.14	0.0-2.9	0.5-2.0	.24	.24	3	3	86
	3-15	5-18	1.40-1.70	0.60-2.00	0.12-0.17	0.0-2.9	0.5-1.0	.24	.24			
	15-31	0-8	1.50-1.80	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.17	.17			
	31-36	0-8	1.50-1.80	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.17	.17			
	36-60	1-6	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
615D:												
Cress-----	0-3	5-18	1.25-1.60	0.60-2.00	0.12-0.14	0.0-2.9	0.5-2.0	.24	.24	3	3	86
	3-15	5-18	1.40-1.70	0.60-2.00	0.12-0.17	0.0-2.9	0.5-1.0	.24	.24			
	15-31	0-8	1.50-1.80	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.17	.17			
	31-36	0-8	1.50-1.80	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.17	.17			
	36-60	1-6	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
623A:												
Capitola-----	0-5	0-0	0.15-0.35	2.00-6.00	0.35-0.45	---	50-80	.02	.02	4	8	0
	5-7	12-16	1.25-1.45	0.60-2.00	0.16-0.24	0.0-2.9	3.0-10	.37	.37			
	7-22	8-17	1.35-1.60	0.60-2.00	0.09-0.22	0.0-2.9	0.5-1.0	.43	.43			
	22-33	8-16	1.40-1.90	0.60-2.00	0.07-0.16	0.0-2.9	0.0-0.5	.28	.28			
	33-60	5-10	1.70-1.90	0.01-0.06	0.03-0.07	0.0-2.9	0.0-0.5	.28	.28			
624A:												
Ossmer-----	0-4	8-15	1.35-1.55	0.60-2.00	0.20-0.24	0.0-2.9	2.0-3.0	.37	.37	4	5	56
	4-6	5-14	1.40-1.60	0.60-2.00	0.20-0.22	0.0-2.9	0.0-1.0	.37	.37			
	6-11	6-16	1.40-1.65	0.60-2.00	0.20-0.22	0.0-2.9	0.0-0.5	.37	.37			
	11-26	7-17	1.40-1.65	0.60-2.00	0.20-0.22	0.0-2.9	0.0-0.5	.37	.37			
	26-34	7-17	1.40-1.70	0.60-2.00	0.06-0.19	0.0-2.9	0.0-0.5	.32	.32			
	34-38	7-17	1.40-1.70	0.60-2.00	0.06-0.19	0.0-2.9	0.0-0.5	.32	.32			
	38-60	0-5	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
632A:												
Aftad-----	0-10	3-8	1.35-1.65	0.60-2.00	0.14-0.18	0.0-2.9	1.0-3.0	.28	.28	5	3	86
	10-29	3-12	1.45-1.70	0.60-2.00	0.09-0.19	0.0-2.9	0.5-1.0	.43	.43			
	29-36	6-14	1.50-1.70	0.60-2.00	0.10-0.19	0.0-2.9	0.0-0.5	.43	.43			
	36-41	8-15	1.50-1.70	0.60-2.00	0.10-0.19	0.0-2.9	0.0-0.5	.43	.43			
	41-60	5-12	1.50-1.70	0.20-0.60	0.11-0.22	0.0-2.9	0.0-0.5	.24	.24			

Table 24.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
<b>632B:</b>												
<b>Aftad-----</b>	0-10	3-8	1.35-1.65	0.60-2.00	0.14-0.18	0.0-2.9	1.0-3.0	.28	.28	5	3	86
	10-29	3-12	1.45-1.70	0.60-2.00	0.09-0.19	0.0-2.9	0.5-1.0	.43	.43			
	29-36	6-14	1.50-1.70	0.60-2.00	0.10-0.19	0.0-2.9	0.0-0.5	.43	.43			
	36-41	8-15	1.50-1.70	0.60-2.00	0.10-0.19	0.0-2.9	0.0-0.5	.43	.43			
	41-60	5-12	1.50-1.70	0.20-0.60	0.11-0.22	0.0-2.9	0.0-0.5	.24	.24			
<b>632C:</b>												
<b>Aftad-----</b>	0-10	3-8	1.35-1.65	0.60-2.00	0.14-0.18	0.0-2.9	1.0-3.0	.28	.28	5	3	86
	10-29	3-12	1.45-1.70	0.60-2.00	0.09-0.19	0.0-2.9	0.5-1.0	.43	.43			
	29-36	6-14	1.50-1.70	0.60-2.00	0.10-0.19	0.0-2.9	0.0-0.5	.43	.43			
	36-41	8-15	1.50-1.70	0.60-2.00	0.10-0.19	0.0-2.9	0.0-0.5	.43	.43			
	41-60	5-12	1.50-1.70	0.20-0.60	0.11-0.22	0.0-2.9	0.0-0.5	.24	.24			
<b>633F:</b>												
<b>Pence-----</b>	0-3	3-15	1.30-1.70	2.00-6.00	0.11-0.15	0.0-2.9	1.0-3.0	.24	.24	3	3	86
	3-8	3-13	1.35-1.65	0.60-6.00	0.11-0.18	0.0-2.9	0.5-1.0	.24	.24			
	8-15	5-15	1.35-1.45	0.60-6.00	0.10-0.15	0.0-2.9	1.0-2.0	.17	.24			
	15-21	0-6	1.65-1.75	2.00-60	0.05-0.08	0.0-2.9	0.0-0.5	.05	.10			
	21-60	0-5	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
<b>Padus-----</b>	0-2	3-15	1.35-1.70	0.60-2.00	0.10-0.18	0.0-2.9	1.0-3.0	.24	.24	4	3	56
	2-3	3-13	1.40-1.70	0.60-2.00	0.09-0.19	0.0-2.9	0.5-1.0	.24	.24			
	3-19	5-15	1.40-1.70	0.60-2.00	0.09-0.19	0.0-2.9	1.0-2.0	.24	.24			
	19-26	5-15	1.40-1.70	0.60-2.00	0.06-0.19	0.0-2.9	0.0-0.5	.24	.24			
	26-38	7-17	1.40-1.70	0.60-2.00	0.06-0.19	0.0-2.9	0.0-0.5	.24	.24			
	38-60	0-5	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
<b>648B:</b>												
<b>Sconsin-----</b>	0-4	9-14	1.35-1.55	0.60-2.00	0.20-0.24	0.0-2.9	2.0-3.0	.37	.37	4	5	56
	4-5	5-14	1.40-1.60	0.60-2.00	0.20-0.22	0.0-2.9	0.5-1.0	.37	.37			
	5-10	5-14	1.40-1.60	0.60-2.00	0.20-0.22	0.0-2.9	0.5-1.0	.37	.37			
	10-18	5-14	1.40-1.60	0.60-2.00	0.20-0.22	0.0-2.9	0.5-1.0	.37	.37			
	18-27	5-14	1.40-1.60	0.60-2.00	0.20-0.22	0.0-2.9	0.5-1.0	.37	.37			
	27-34	7-17	1.50-1.70	0.60-2.00	0.05-0.19	0.0-2.9	0.0-0.5	.32	.32			
	34-38	6-15	1.80-2.00	0.01-0.20	0.05-0.19	0.0-2.9	0.0-0.5	.24	.24			
	38-60	1-6	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
<b>670C:</b>												
<b>Keweenaw-----</b>	0-2	5-20	1.35-1.60	2.00-6.00	0.09-0.14	0.0-2.9	1.0-2.0	.20	.20	5	3	86
	2-4	5-15	1.45-1.80	2.00-6.00	0.09-0.14	0.0-2.9	0.5-1.0	.17	.24			
	4-16	5-15	1.55-1.80	2.00-6.00	0.08-0.13	0.0-2.9	0.0-0.5	.17	.24			
	16-20	2-10	1.55-1.80	2.00-6.00	0.05-0.10	0.0-2.9	0.0-0.5	.17	.24			
	20-27	2-10	1.55-1.80	0.60-6.00	0.05-0.10	0.0-2.9	0.0-0.5	.17	.24			
	27-43	2-15	1.55-1.80	0.60-6.00	0.05-0.10	0.0-2.9	0.0-0.5	.17	.24			
	43-75	5-20	1.55-1.80	0.60-6.00	0.08-0.13	0.0-2.9	0.0-0.5	.17	.24			
	75-80	2-10	1.50-1.70	2.00-6.00	0.05-0.10	0.0-2.9	0.0-0.5	.17	.17			
<b>Pence-----</b>	0-3	3-15	1.30-1.70	2.00-6.00	0.11-0.15	0.0-2.9	1.0-3.0	.24	.24	3	3	86
	3-8	3-13	1.35-1.65	0.60-6.00	0.11-0.18	0.0-2.9	0.5-1.0	.24	.24			
	8-15	5-15	1.35-1.45	0.60-6.00	0.10-0.15	0.0-2.9	1.0-2.0	.17	.24			
	15-21	0-6	1.65-1.75	2.00-60	0.05-0.08	0.0-2.9	0.0-0.5	.05	.10			
	21-60	0-5	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
<b>670E:</b>												
<b>Keweenaw-----</b>	0-2	5-20	1.35-1.60	2.00-6.00	0.09-0.14	0.0-2.9	1.0-2.0	.20	.20	5	3	86
	2-4	5-15	1.45-1.80	2.00-6.00	0.09-0.14	0.0-2.9	0.5-1.0	.17	.24			
	4-16	5-15	1.55-1.80	2.00-6.00	0.08-0.13	0.0-2.9	0.0-0.5	.17	.24			
	16-20	2-10	1.55-1.80	2.00-6.00	0.05-0.10	0.0-2.9	0.0-0.5	.17	.24			
	20-27	2-10	1.55-1.80	0.60-6.00	0.05-0.10	0.0-2.9	0.0-0.5	.17	.24			
	27-43	2-15	1.55-1.80	0.60-6.00	0.05-0.10	0.0-2.9	0.0-0.5	.17	.24			
	43-75	5-20	1.55-1.80	0.60-6.00	0.08-0.13	0.0-2.9	0.0-0.5	.17	.24			
	75-80	2-10	1.50-1.70	2.00-6.00	0.05-0.10	0.0-2.9	0.0-0.5	.17	.17			

Table 24.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
670E:												
Pence-----	0-3	3-15	1.30-1.70	2.00-6.00	0.11-0.15	0.0-2.9	1.0-3.0	.24	.24	3	3	86
	3-8	3-13	1.35-1.65	0.60-6.00	0.11-0.18	0.0-2.9	0.5-1.0	.24	.24			
	8-15	5-15	1.35-1.45	0.60-6.00	0.10-0.15	0.0-2.9	1.0-2.0	.17	.24			
	15-21	0-6	1.65-1.75	2.00-60	0.05-0.08	0.0-2.9	0.0-0.5	.05	.10			
	21-60	0-5	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
671B:												
Spoonerhill, stony----	0-3	2-15	1.35-1.70	2.00-6.00	0.12-0.14	0.0-2.9	1.0-2.0	.24	.24	5	8	0
	3-12	2-15	1.45-1.80	2.00-6.00	0.06-0.14	0.0-2.9	0.5-1.0	.17	.24			
	12-16	2-15	1.55-1.80	2.00-6.00	0.05-0.13	0.0-2.9	0.0-0.5	.17	.24			
	16-34	2-10	1.55-1.80	0.60-2.00	0.03-0.10	0.0-2.9	0.0-0.5	.17	.24			
	34-46	2-10	1.80-1.85	0.20-0.60	0.03-0.10	0.0-2.9	0.0-0.5	.17	.17			
	46-80	2-10	1.80-1.85	0.20-0.60	0.03-0.10	0.0-2.9	0.0-0.5	.17	.17			
Spoonerhill-----	0-3	2-15	1.35-1.70	2.00-6.00	0.12-0.14	0.0-2.9	1.0-2.0	.20	.20	5	8	0
	3-12	2-15	1.45-1.80	2.00-6.00	0.06-0.14	0.0-2.9	0.5-1.0	.17	.24			
	12-16	2-15	1.55-1.80	2.00-6.00	0.05-0.13	0.0-2.9	0.0-0.5	.17	.24			
	16-34	2-10	1.55-1.80	0.60-2.00	0.03-0.10	0.0-2.9	0.0-0.5	.17	.24			
	34-46	2-10	1.80-1.85	0.20-0.60	0.03-0.10	0.0-2.9	0.0-0.5	.17	.17			
	46-80	2-10	1.80-1.85	0.20-0.60	0.03-0.10	0.0-2.9	0.0-0.5	.17	.17			
680B:												
Stanberry, stony-----	0-1	0-0	0.15-0.40	6.00-20	0.35-0.45	---	30-80	.02	.02	4	3	86
	1-3	5-12	1.35-1.70	0.60-2.00	0.12-0.22	0.0-2.9	0.5-2.0	.24	.24			
	3-19	6-14	1.35-1.70	0.60-2.00	0.09-0.19	0.0-2.9	0.5-2.0	.24	.24			
	19-24	7-16	1.65-1.85	0.20-0.60	0.09-0.14	0.0-2.9	0.0-0.5	.20	.28			
	24-32	9-17	1.65-1.85	0.20-0.60	0.09-0.14	0.0-2.9	0.0-0.5	.20	.28			
	32-42	5-10	1.65-1.85	0.20-0.60	0.06-0.11	0.0-2.9	0.0-0.5	.20	.28			
	42-80	2-10	1.85-2.00	0.06-0.20	0.02-0.05	0.0-2.9	0.0-0.5	.28	.28			
Pence, stony-----	0-3	3-15	1.30-1.70	2.00-6.00	0.11-0.15	0.0-2.9	1.0-3.0	.24	.24	3	3	86
	3-8	3-13	1.35-1.65	0.60-6.00	0.11-0.18	0.0-2.9	0.5-1.0	.24	.24			
	8-15	5-15	1.35-1.45	0.60-6.00	0.10-0.15	0.0-2.9	1.0-2.0	.17	.24			
	15-21	0-6	1.65-1.75	2.00-60	0.05-0.08	0.0-2.9	0.0-0.5	.05	.10			
	21-60	0-5	1.55-1.80	6.00-60	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
683A:												
Tipler-----	0-3	3-15	1.35-1.70	0.60-2.00	0.10-0.15	0.0-2.9	2.0-3.0	.24	.24	4	3	86
	3-5	3-13	1.40-1.65	0.60-2.00	0.08-0.19	0.0-2.9	0.5-1.0	.24	.24			
	5-19	5-15	1.40-1.65	0.60-2.00	0.09-0.19	0.0-2.9	1.0-2.0	.24	.24			
	19-26	7-17	1.40-1.65	0.60-2.00	0.06-0.19	0.0-2.9	0.0-0.5	.24	.24			
	26-33	8-18	1.40-1.65	0.60-2.00	0.06-0.19	0.0-2.9	0.0-0.5	.24	.24			
	33-60	0-5	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
706A:												
Winterfield-----	0-7	2-15	0.90-1.50	6.00-20	0.17-0.19	0.0-2.9	2.0-4.0	.37	.37	5	3	86
	7-60	0-10	1.55-1.65	6.00-20	0.04-0.10	0.0-2.9	0.0-0.5	.10	.17			
Totagatic-----	0-4	5-15	1.30-1.55	6.00-20	0.15-0.17	0.0-2.9	1.0-2.0	.28	.28	5	3	86
	4-8	0-10	1.40-1.65	6.00-20	0.05-0.15	0.0-2.9	0.0-0.5	.10	.15			
	8-17	0-10	1.40-1.65	6.00-20	0.05-0.15	0.0-2.9	0.0-0.5	.10	.15			
	17-28	0-10	1.40-1.65	6.00-20	0.05-0.10	0.0-2.9	0.0-10	.10	.15			
	28-46	0-10	1.40-1.65	6.00-20	0.05-0.10	0.0-2.9	0.0-10	.10	.15			
	46-70	0-10	1.40-1.65	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.10	.15			
	70-80	0-10	1.40-1.65	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.10	.15			

Table 24.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
724A:												
Rib-----	0-7	10-20	1.25-1.35	0.60-2.00	0.22-0.28	0.0-2.9	3.0-10	.32	.32	4	5	56
	7-10	10-15	1.45-1.55	0.60-2.00	0.18-0.22	0.0-2.9	0.0-1.0	.43	.43			
	10-32	18-30	1.45-1.55	0.60-2.00	0.18-0.22	3.0-5.9	0.5-1.0	.43	.43			
	32-35	5-25	1.45-1.75	0.60-2.00	0.10-0.19	0.0-2.9	0.0-0.5	.32	.32			
	35-37	2-10	1.65-1.75	2.00-6.00	0.05-0.08	0.0-2.9	0.0-0.5	.10	.15			
	37-60	0-5	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
Rock outcrop.												
726B:												
Sissabagama-----	0-10	2-12	1.35-1.60	6.00-20	0.09-0.11	0.0-2.9	1.0-3.0	.10	.10	5	2	134
	10-31	2-12	1.40-1.65	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
	31-45	2-12	1.50-1.65	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.17	.17			
	45-80	5-15	1.50-1.65	0.20-0.60	0.05-0.20	0.0-2.9	0.0-0.5	.24	.24			
733A:												
Wozny-----	0-3	0-0	0.15-0.35	2.00-6.00	0.35-0.45	---	50-80	.02	.02	5	8	0
	3-17	5-12	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	0.5-1.0	.32	.32			
	17-37	8-16	1.45-1.65	0.60-2.00	0.12-0.22	0.0-2.9	0.5-1.0	.43	.43			
	37-56	4-12	1.65-1.85	0.20-0.60	0.12-0.19	0.0-2.9	0.5-1.0	.24	.24			
	56-80	2-10	1.85-2.00	0.06-0.20	0.02-0.05	0.0-2.9	0.0-0.5	.10	.17			
771A:												
Lenroot-----	0-4	2-15	1.40-1.60	6.00-20	0.09-0.11	0.0-2.9	0.5-1.0	.10	.10	5	2	134
	4-8	0-10	1.45-1.75	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.05	.10			
	8-14	0-10	1.45-1.75	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.05	.10			
	14-21	0-5	1.45-1.75	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.05	.10			
	21-80	0-5	1.45-1.75	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.05	.10			
827A:												
Scoba-----	0-9	6-15	1.35-1.70	0.60-2.00	0.12-0.14	0.0-2.9	2.0-3.0	.24	.24	4	5	56
	9-16	6-15	1.40-1.70	0.60-2.00	0.07-0.19	0.0-2.9	0.0-0.5	.32	.32			
	16-20	8-17	1.40-1.70	0.60-2.00	0.07-0.19	0.0-2.9	0.0-0.5	.24	.24			
	20-26	8-17	1.40-1.70	0.60-2.00	0.07-0.19	0.0-2.9	0.0-0.5	.24	.24			
	26-31	2-12	1.45-1.70	0.60-2.00	0.03-0.10	0.0-2.9	0.0-0.5	.17	.17			
	31-60	1-6	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
853C:												
Frogcreek-----	0-4	5-12	1.35-1.55	0.60-2.00	0.20-0.22	0.0-2.9	2.0-4.0	.37	.37	5	8	0
	4-13	5-12	1.45-1.65	0.60-2.00	0.20-0.22	0.0-2.9	1.0-2.0	.37	.37			
	13-19	6-16	1.65-1.85	0.20-0.60	0.07-0.20	0.0-2.9	0.0-0.5	.20	.28			
	19-32	7-18	1.65-1.85	0.20-0.60	0.07-0.19	0.0-2.9	0.0-0.5	.20	.28			
	32-46	7-18	1.65-1.85	0.20-0.60	0.07-0.19	0.0-2.9	0.0-0.5	.20	.28			
	46-80	2-10	1.85-2.00	0.06-0.20	0.02-0.05	0.0-2.9	0.0-0.5	.10	.17			
Stinnett-----	0-4	5-12	1.35-1.55	0.60-2.00	0.20-0.22	0.0-2.9	2.0-4.0	.37	.37	5	8	0
	4-7	0-12	1.40-1.65	0.60-2.00	0.20-0.22	0.0-2.9	0.0-0.5	.37	.37			
	7-18	0-12	1.40-1.65	0.60-2.00	0.20-0.22	0.0-2.9	0.0-0.5	.37	.37			
	18-29	8-17	1.45-1.65	0.60-2.00	0.20-0.22	0.0-2.9	0.0-0.5	.37	.37			
	29-34	6-16	1.65-1.85	0.20-0.60	0.07-0.19	0.0-2.9	0.0-0.5	.28	.28			
	34-41	7-18	1.65-1.85	0.20-0.60	0.07-0.19	0.0-2.9	0.0-0.5	.28	.28			
	41-55	2-10	1.65-1.85	0.20-0.60	0.07-0.19	0.0-2.9	0.0-0.5	.10	.17			
	55-80	2-10	1.85-2.00	0.06-0.20	0.02-0.05	0.0-2.9	0.0-0.5	.17	.17			
Wozny-----	0-3	0-0	0.15-0.35	2.00-6.00	0.35-0.45	---	50-80	.02	.02	5	8	0
	3-17	5-12	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	0.5-1.0	.32	.32			
	17-37	8-16	1.45-1.65	0.60-2.00	0.12-0.22	0.0-2.9	0.5-1.0	.43	.43			
	37-56	4-12	1.65-1.85	0.20-0.60	0.12-0.19	0.0-2.9	0.5-1.0	.24	.24			
	56-80	2-10	1.85-2.00	0.06-0.20	0.02-0.05	0.0-2.9	0.0-0.5	.10	.17			



Table 24.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
856B:												
Stinnett-----	0-4	5-12	1.35-1.55	0.60-2.00	0.20-0.22	0.0-2.9	2.0-4.0	.37	.37	5	8	0
	4-7	0-12	1.40-1.65	0.60-2.00	0.20-0.22	0.0-2.9	0.0-0.5	.37	.37			
	7-18	0-12	1.40-1.65	0.60-2.00	0.20-0.22	0.0-2.9	0.0-0.5	.37	.37			
	18-29	8-17	1.45-1.65	0.60-2.00	0.20-0.22	0.0-2.9	0.0-0.5	.37	.37			
	29-34	6-16	1.65-1.85	0.20-0.60	0.07-0.19	0.0-2.9	0.0-0.5	.28	.28			
	34-41	7-18	1.65-1.85	0.20-0.60	0.07-0.19	0.0-2.9	0.0-0.5	.28	.28			
	41-55	2-10	1.65-1.85	0.20-0.60	0.07-0.19	0.0-2.9	0.0-0.5	.10	.17			
	55-80	2-10	1.85-2.00	0.06-0.20	0.02-0.05	0.0-2.9	0.0-0.5	.17	.17			
857B:												
Frogcreek-----	0-4	5-12	1.35-1.55	0.60-2.00	0.20-0.22	0.0-2.9	2.0-4.0	.37	.37	5	8	0
	4-13	5-12	1.45-1.65	0.60-2.00	0.20-0.22	0.0-2.9	1.0-2.0	.37	.37			
	13-19	6-16	1.65-1.85	0.20-0.60	0.07-0.20	0.0-2.9	0.0-0.5	.20	.28			
	19-32	7-18	1.65-1.85	0.20-0.60	0.07-0.19	0.0-2.9	0.0-0.5	.20	.28			
	32-46	7-18	1.65-1.85	0.20-0.60	0.07-0.19	0.0-2.9	0.0-0.5	.20	.28			
	46-80	2-10	1.85-2.00	0.06-0.20	0.02-0.05	0.0-2.9	0.0-0.5	.10	.17			
857C:												
Frogcreek-----	0-4	5-12	1.35-1.55	0.60-2.00	0.20-0.22	0.0-2.9	2.0-4.0	.37	.37	5	8	0
	4-13	5-12	1.45-1.65	0.60-2.00	0.20-0.22	0.0-2.9	1.0-2.0	.37	.37			
	13-19	6-16	1.65-1.85	0.20-0.60	0.07-0.20	0.0-2.9	0.0-0.5	.20	.28			
	19-32	7-18	1.65-1.85	0.20-0.60	0.07-0.19	0.0-2.9	0.0-0.5	.20	.28			
	32-46	7-18	1.65-1.85	0.20-0.60	0.07-0.19	0.0-2.9	0.0-0.5	.20	.28			
	46-80	2-10	1.85-2.00	0.06-0.20	0.02-0.05	0.0-2.9	0.0-0.5	.10	.17			
873B:												
Stanberry-----	0-1	0-0	0.15-0.40	6.00-20	0.35-0.45	---	30-80	.02	.02	4	3	86
	1-3	5-12	1.35-1.70	0.60-2.00	0.12-0.22	0.0-2.9	0.5-2.0	.24	.24			
	3-19	6-14	1.35-1.70	0.60-2.00	0.09-0.19	0.0-2.9	0.5-2.0	.24	.24			
	19-24	7-16	1.65-1.85	0.20-0.60	0.09-0.14	0.0-2.9	0.0-0.5	.20	.28			
	24-32	9-17	1.65-1.85	0.20-0.60	0.09-0.14	0.0-2.9	0.0-0.5	.20	.28			
	32-42	5-10	1.65-1.85	0.20-0.60	0.06-0.11	0.0-2.9	0.0-0.5	.20	.28			
	42-80	2-10	1.85-2.00	0.06-0.20	0.02-0.05	0.0-2.9	0.0-0.5	.28	.28			
873C:												
Stanberry-----	0-1	0-0	0.15-0.40	6.00-20	0.35-0.45	---	30-80	.02	.02	4	3	86
	1-3	5-12	1.35-1.70	0.60-2.00	0.12-0.22	0.0-2.9	0.5-2.0	.24	.24			
	3-19	6-14	1.35-1.70	0.60-2.00	0.09-0.19	0.0-2.9	0.5-2.0	.24	.24			
	19-24	7-16	1.65-1.85	0.20-0.60	0.09-0.14	0.0-2.9	0.0-0.5	.20	.28			
	24-32	9-17	1.65-1.85	0.20-0.60	0.09-0.14	0.0-2.9	0.0-0.5	.20	.28			
	32-42	5-10	1.65-1.85	0.20-0.60	0.06-0.11	0.0-2.9	0.0-0.5	.20	.28			
	42-80	2-10	1.85-2.00	0.06-0.20	0.02-0.05	0.0-2.9	0.0-0.5	.28	.28			
873D:												
Stanberry-----	0-1	0-0	0.15-0.40	6.00-20	0.35-0.45	---	30-80	.02	.02	4	3	86
	1-3	5-12	1.35-1.70	0.60-2.00	0.12-0.22	0.0-2.9	0.5-2.0	.24	.24			
	3-19	6-14	1.35-1.70	0.60-2.00	0.09-0.19	0.0-2.9	0.5-2.0	.24	.24			
	19-24	7-16	1.65-1.85	0.20-0.60	0.09-0.14	0.0-2.9	0.0-0.5	.20	.28			
	24-32	9-17	1.65-1.85	0.20-0.60	0.09-0.14	0.0-2.9	0.0-0.5	.20	.28			
	32-42	5-10	1.65-1.85	0.20-0.60	0.06-0.11	0.0-2.9	0.0-0.5	.20	.28			
	42-80	2-10	1.85-2.00	0.06-0.20	0.02-0.05	0.0-2.9	0.0-0.5	.28	.28			
905A:												
Cublake-----	0-3	0-8	1.40-1.65	6.00-20	0.09-0.11	0.0-2.9	0.5-2.0	.10	.10	5	1	220
	3-4	0-10	1.35-1.65	2.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.17	.17			
	4-23	0-10	1.40-1.70	2.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.17	.17			
	23-32	0-5	1.45-1.70	2.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
	32-40	0-5	1.45-1.70	2.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
	40-48	0-5	1.45-1.70	2.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
	48-60	10-25	1.40-1.80	0.20-2.00	0.17-0.22	0.0-2.9	0.0-0.5	.32	.32			

Table 24.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
926A: Flink-----	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
	0-3	0-8	1.40-1.65	6.00-20	0.09-0.11	0.0-2.9	0.5-2.0	.10	.10	5	1	220
	3-6	1-5	1.35-1.60	6.00-20	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
	6-9	1-6	1.35-1.65	2.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
	9-26	1-6	1.35-1.65	2.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
	26-35	1-3	1.40-1.70	2.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
	35-46	1-3	1.40-1.70	2.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.15	.15			
	46-52	10-35	1.40-1.80	0.20-2.00	0.18-0.22	0.0-2.9	0.0-0.5	.32	.32			
	52-80	5-35	1.40-1.80	0.20-2.00	0.05-0.22	0.0-2.9	0.0-0.5	.32	.32			
943D: Stanberry-----	0-1	0-0	0.15-0.40	6.00-20	0.35-0.45	---	30-80	.02	.02	4	3	86
	1-3	5-12	1.35-1.70	0.60-2.00	0.12-0.22	0.0-2.9	0.5-2.0	.24	.24			
	3-19	6-14	1.35-1.70	0.60-2.00	0.09-0.19	0.0-2.9	0.5-2.0	.24	.24			
	19-24	7-16	1.65-1.85	0.20-0.60	0.09-0.14	0.0-2.9	0.0-0.5	.20	.28			
	24-32	9-17	1.65-1.85	0.20-0.60	0.09-0.14	0.0-2.9	0.0-0.5	.20	.28			
	32-42	5-10	1.65-1.85	0.20-0.60	0.06-0.11	0.0-2.9	0.0-0.5	.20	.28			
	42-80	2-10	1.85-2.00	0.06-0.20	0.00-0.04	0.0-2.9	0.0-0.5	.28	.28			
Greenwood-----	0-6	0-0	0.30-0.40	2.00-6.00	0.55-0.65	---	55-75	---	---	3	7	38
	6-60	0-0	0.10-0.25	0.60-2.00	0.45-0.55	---	55-75	---	---			
948A: Billyboy-----	0-4	9-14	1.35-1.55	0.60-2.00	0.20-0.24	0.0-2.9	2.0-3.0	.37	.37	4	5	56
	4-11	5-14	1.40-1.60	0.60-2.00	0.20-0.22	0.0-2.9	0.5-1.0	.37	.37			
	11-20	5-15	1.40-1.60	0.60-2.00	0.20-0.22	0.0-2.9	0.5-1.0	.37	.37			
	20-26	6-17	1.50-1.70	0.60-2.00	0.11-0.19	0.0-2.9	0.0-0.5	.24	.28			
	26-30	8-17	1.50-1.70	0.60-2.00	0.11-0.19	0.0-2.9	0.0-0.5	.20	.24			
	30-35	6-10	1.45-1.65	6.00-20	0.05-0.10	0.0-2.9	0.0-0.5	.10	.15			
	35-60	0-5	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
970C: Keweenaw-----	0-2	5-20	1.35-1.60	2.00-6.00	0.09-0.14	0.0-2.9	1.0-2.0	.20	.20	5	8	0
	2-4	5-15	1.45-1.80	2.00-6.00	0.09-0.14	0.0-2.9	0.5-1.0	.17	.24			
	4-16	5-15	1.55-1.80	2.00-6.00	0.08-0.13	0.0-2.9	0.0-0.5	.17	.24			
	16-20	2-10	1.55-1.80	2.00-6.00	0.05-0.10	0.0-2.9	0.0-0.5	.17	.24			
	20-27	2-10	1.55-1.80	0.60-6.00	0.05-0.10	0.0-2.9	0.0-0.5	.17	.24			
	27-43	2-15	1.55-1.80	0.60-6.00	0.05-0.10	0.0-2.9	0.0-0.5	.17	.24			
	43-75	5-20	1.55-1.80	0.60-6.00	0.08-0.13	0.0-2.9	0.0-0.5	.17	.24			
	75-80	2-10	1.50-1.70	2.00-6.00	0.05-0.10	0.0-2.9	0.0-0.5	.17	.17			
Pence-----	0-3	3-15	1.30-1.70	2.00-6.00	0.11-0.15	0.0-2.9	1.0-3.0	.24	.24	3	3	86
	3-8	3-13	1.35-1.65	0.60-6.00	0.11-0.18	0.0-2.9	0.5-1.0	.24	.24			
	8-15	5-15	1.35-1.45	0.60-6.00	0.10-0.15	0.0-2.9	1.0-2.0	.17	.24			
	15-21	0-6	1.65-1.75	2.00-60	0.05-0.08	0.0-2.9	0.0-0.5	.05	.10			
	21-60	0-5	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
Greenwood-----	0-6	0-0	0.30-0.40	6.00-20	0.55-0.65	---	55-75	---	---	3	7	38
	6-60	0-0	0.10-0.25	0.60-6.00	0.45-0.55	---	55-75	---	---			
970E: Keweenaw-----	0-2	5-20	1.35-1.60	2.00-6.00	0.09-0.14	0.0-2.9	1.0-2.0	.20	.20	5	8	0
	2-4	5-15	1.45-1.80	2.00-6.00	0.09-0.14	0.0-2.9	0.5-1.0	.17	.24			
	4-16	5-15	1.55-1.80	2.00-6.00	0.08-0.13	0.0-2.9	0.0-0.5	.17	.24			
	16-20	2-10	1.55-1.80	2.00-6.00	0.05-0.10	0.0-2.9	0.0-0.5	.17	.24			
	20-27	2-10	1.55-1.80	0.60-6.00	0.05-0.10	0.0-2.9	0.0-0.5	.17	.24			
	27-43	2-15	1.55-1.80	0.60-6.00	0.05-0.10	0.0-2.9	0.0-0.5	.17	.24			
	43-75	5-20	1.55-1.80	0.60-6.00	0.08-0.13	0.0-2.9	0.0-0.5	.17	.24			
	75-80	2-10	1.50-1.70	2.00-6.00	0.05-0.10	0.0-2.9	0.0-0.5	.17	.17			

Table 24.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
970E:												
Pence-----	0-3	3-15	1.30-1.70	2.00-6.00	0.11-0.15	0.0-2.9	1.0-3.0	.24	.24	3	3	86
	3-8	3-13	1.35-1.65	0.60-6.00	0.11-0.18	0.0-2.9	0.5-1.0	.24	.24			
	8-15	5-15	1.35-1.45	0.60-6.00	0.10-0.15	0.0-2.9	1.0-2.0	.17	.24			
	15-21	0-6	1.65-1.75	2.00-60	0.05-0.08	0.0-2.9	0.0-0.5	.05	.10			
	21-60	0-5	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
Greenwood-----	0-6	0-0	0.30-0.40	6.00-20	0.55-0.65	---	55-75	---	---	3	7	38
	6-60	0-0	0.10-0.25	0.60-6.00	0.45-0.55	---	55-75	---	---			
1070C:												
Fremstadt-----	0-5	5-15	1.35-1.60	2.00-20	0.12-0.14	0.0-2.9	1.0-2.0	.20	.20	5	8	0
	5-33	2-10	1.45-1.80	2.00-20	0.08-0.11	0.0-2.9	0.6-1.0	.15	.17			
	33-37	5-15	1.50-1.80	2.00-20	0.05-0.11	0.0-2.9	0.0-0.5	.15	.17			
	37-45	2-15	1.50-1.80	2.00-20	0.05-0.11	0.0-2.9	0.0-0.5	.15	.17			
	45-70	2-10	1.50-1.70	2.00-20	0.04-0.10	0.0-2.9	0.0-0.5	.15	.17			
	70-80	2-10	1.50-1.70	2.00-6.00	0.04-0.10	0.0-2.9	0.0-0.5	.15	.17			
Cress-----	0-3	5-18	1.25-1.60	0.60-2.00	0.12-0.14	0.0-2.9	0.5-2.0	.24	.24	3	3	86
	3-15	5-18	1.40-1.70	0.60-2.00	0.12-0.17	0.0-2.9	0.5-1.0	.24	.24			
	15-31	0-8	1.50-1.80	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.17	.17			
	31-36	0-8	1.50-1.80	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.17	.17			
	36-60	1-6	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
1070D:												
Fremstadt-----	0-5	5-15	1.35-1.60	2.00-20	0.12-0.14	0.0-2.9	1.0-2.0	.20	.20	5	8	0
	5-33	2-10	1.45-1.80	2.00-20	0.08-0.11	0.0-2.9	0.6-1.0	.15	.17			
	33-37	5-15	1.50-1.80	2.00-20	0.05-0.11	0.0-2.9	0.0-0.5	.15	.17			
	37-45	2-15	1.50-1.80	2.00-20	0.05-0.11	0.0-2.9	0.0-0.5	.15	.17			
	45-70	2-10	1.50-1.70	2.00-20	0.04-0.10	0.0-2.9	0.0-0.5	.15	.17			
	70-80	2-10	1.50-1.70	2.00-6.00	0.04-0.10	0.0-2.9	0.0-0.5	.15	.17			
Cress-----	0-3	5-18	1.25-1.60	0.60-2.00	0.12-0.14	0.0-2.9	0.5-2.0	.24	.24	3	3	86
	3-15	5-18	1.40-1.70	0.60-2.00	0.12-0.17	0.0-2.9	0.5-1.0	.24	.24			
	15-31	0-8	1.50-1.80	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.17	.17			
	31-36	0-8	1.50-1.80	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.17	.17			
	36-60	1-6	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			
1080B:												
Spoonerhill-----	0-3	2-15	1.35-1.70	2.00-6.00	0.12-0.14	0.0-2.9	1.0-2.0	.24	.24	5	8	0
	3-12	2-15	1.45-1.80	2.00-6.00	0.06-0.14	0.0-2.9	0.5-1.0	.17	.24			
	12-16	2-15	1.55-1.80	2.00-6.00	0.05-0.13	0.0-2.9	0.0-0.5	.17	.24			
	16-34	2-10	1.55-1.80	0.60-2.00	0.03-0.10	0.0-2.9	0.0-0.5	.17	.24			
	34-46	2-10	1.80-1.85	0.20-0.60	0.03-0.10	0.0-2.9	0.0-0.5	.17	.17			
	46-80	2-10	1.80-1.85	0.20-0.60	0.03-0.10	0.0-2.9	0.0-0.5	.17	.17			
Spoonerhill, stony----	0-3	2-15	1.35-1.70	2.00-6.00	0.12-0.14	0.0-2.9	1.0-2.0	.24	.24	5	8	0
	3-12	2-15	1.45-1.80	2.00-6.00	0.06-0.14	0.0-2.9	0.5-1.0	.17	.24			
	12-16	2-15	1.55-1.80	2.00-6.00	0.05-0.13	0.0-2.9	0.0-0.5	.17	.24			
	16-34	2-10	1.55-1.80	0.60-2.00	0.03-0.10	0.0-2.9	0.0-0.5	.17	.24			
	34-46	2-10	1.80-1.85	0.20-0.60	0.03-0.10	0.0-2.9	0.0-0.5	.17	.17			
	46-80	2-10	1.80-1.85	0.20-0.60	0.03-0.10	0.0-2.9	0.0-0.5	.17	.17			
Cress-----	0-3	5-18	1.25-1.60	0.60-2.00	0.12-0.14	0.0-2.9	0.5-2.0	.24	.24	3	3	86
	3-15	5-18	1.40-1.70	0.60-2.00	0.12-0.17	0.0-2.9	0.5-1.0	.24	.24			
	15-31	0-8	1.50-1.80	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.17	.17			
	31-36	0-8	1.50-1.80	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.17	.17			
	36-60	1-6	1.55-1.80	6.00-20	0.01-0.07	0.0-2.9	0.0-0.5	.10	.15			

Table 24.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
1653C: Stanberry-----	0-1	0-0	0.15-0.40	6.00-20	0.35-0.45	---	30-80	.02	.02	4	3	86
	1-3	5-12	1.35-1.70	0.60-2.00	0.12-0.22	0.0-2.9	0.5-2.0	.24	.24			
	3-19	6-14	1.35-1.70	0.60-2.00	0.09-0.19	0.0-2.9	0.5-2.0	.24	.24			
	19-24	7-16	1.65-1.85	0.20-0.60	0.09-0.14	0.0-2.9	0.0-0.5	.20	.28			
	24-32	9-17	1.65-1.85	0.20-0.60	0.09-0.14	0.0-2.9	0.0-0.5	.20	.28			
	32-42	5-10	1.65-1.85	0.20-0.60	0.06-0.11	0.0-2.9	0.0-0.5	.20	.28			
	42-80	2-10	1.85-2.00	0.06-0.20	0.02-0.05	0.0-2.9	0.0-0.5	.28	.28			
Parkfalls-----	0-5	4-15	1.35-1.70	0.60-2.00	0.12-0.14	0.0-2.9	1.0-2.0	.24	.24	4	3	86
	5-8	5-12	1.35-1.70	0.60-2.00	0.09-0.19	0.0-2.9	0.5-2.0	.24	.24			
	8-17	6-14	1.35-1.70	0.60-2.00	0.09-0.19	0.0-2.9	0.5-2.0	.24	.24			
	17-30	7-16	1.65-1.85	0.20-0.60	0.10-0.14	0.0-2.9	0.0-0.5	.20	.28			
	30-33	9-17	1.65-1.85	0.20-0.60	0.10-0.14	0.0-2.9	0.0-0.5	.20	.28			
	33-48	8-16	1.80-2.00	0.20-0.60	0.04-0.07	0.0-2.9	0.0-0.5	.20	.28			
	48-80	2-10	1.85-2.00	0.06-0.20	0.03-0.05	0.0-2.9	0.0-0.5	.28	.28			
Wozny-----	0-3	0-0	0.15-0.35	2.00-6.00	0.35-0.45	---	50-80	.02	.02	5	8	0
	3-17	5-12	1.25-1.45	0.60-2.00	0.20-0.22	0.0-2.9	0.5-1.0	.32	.32			
	17-37	8-16	1.45-1.65	0.60-2.00	0.12-0.22	0.0-2.9	0.5-1.0	.43	.43			
	37-56	4-12	1.65-1.85	0.20-0.60	0.12-0.19	0.0-2.9	0.5-1.0	.24	.24			
	56-80	2-10	1.85-2.00	0.06-0.20	0.02-0.05	0.0-2.9	0.0-0.5	.10	.17			
2015. Pits												
2050. Landfill												
3011A: Barronett-----	0-9	8-22	1.25-1.50	0.60-2.00	0.20-0.26	0.0-2.9	3.0-10	.32	.32	5	5	56
	9-16	8-20	1.45-1.65	0.60-2.00	0.18-0.22	0.0-2.9	0.0-2.0	.43	.43			
	16-34	18-27	1.40-1.65	0.60-2.00	0.18-0.22	3.0-5.9	0.0-0.5	.43	.43			
	34-60	8-20	1.40-1.65	0.20-0.60	0.12-0.22	0.0-2.9	0.0-0.5	.37	.37			
3125A: Meehan-----	0-5	4-10	1.35-1.65	6.00-20	0.09-0.11	0.0-2.9	0.5-3.0	.10	.10	5	2	134
	5-8	1-5	1.60-1.70	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.15	.15			
	8-28	1-5	1.60-1.70	6.00-20	0.02-0.10	0.0-2.9	0.0-0.5	.15	.15			
	28-60	0-4	1.60-1.70	6.00-20	0.02-0.07	0.0-2.9	0.0-0.5	.15	.15			
3126A: Wurtsmith-----	0-9	0-10	1.30-1.65	6.00-20	0.07-0.09	0.0-2.9	1.0-6.0	.10	.10	5	2	134
	9-37	0-5	1.40-1.60	6.00-20	0.06-0.07	0.0-2.9	0.0-0.5	.15	.15			
	37-60	0-5	1.50-1.65	6.00-20	0.05-0.07	0.0-2.9	0.0-0.5	.15	.15			
3276A: Au Gres-----	0-2	0-0	0.15-0.30	0.60-2.00	0.35-0.45	---	65-85	.02	.02	5	2	134
	2-5	0-10	1.50-1.70	6.00-20	0.06-0.11	0.0-2.9	0.6-1.0	.10	.10			
	5-8	0-10	1.50-1.70	6.00-20	0.06-0.11	0.0-2.9	0.6-1.0	.10	.10			
	8-16	0-10	1.50-1.70	6.00-20	0.06-0.11	0.0-2.9	0.6-1.0	.10	.10			
	16-28	0-10	1.50-1.70	6.00-20	0.06-0.11	0.0-2.9	0.6-1.0	.02	.02			
	28-60	0-5	1.50-1.70	6.00-20	0.05-0.07	0.0-2.9	0.0-0.5	.02	.02			
3312B: Glendenning, very stony-----	0-5	5-15	1.40-1.65	0.60-2.00	0.12-0.14	0.0-2.9	1.0-2.0	.24	.24	4	8	0
	5-15	4-14	1.40-1.70	0.60-2.00	0.08-0.19	0.0-2.9	0.5-1.0	.24	.24			
	15-20	5-15	1.40-1.70	0.60-2.00	0.07-0.19	0.0-2.9	0.0-0.5	.17	.24			
	20-26	5-16	1.40-1.70	0.60-2.00	0.07-0.19	0.0-2.9	0.0-0.5	.17	.24			
	26-40	7-17	1.65-1.90	0.20-0.60	0.07-0.19	0.0-2.9	0.0-0.5	.17	.24			
	40-65	7-17	1.65-1.90	0.20-0.60	0.07-0.19	0.0-2.9	0.0-0.5	.17	.24			
	65-80	5-15	1.80-2.00	0.01-0.06	0.02-0.05	0.0-2.9	0.0-0.5	.17	.24			

Table 24.--Physical Properties of the Soils--Continued

Map symbol and soil name	Depth	Clay	Moist bulk density	Permea- bility	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
								Kw	Kf	T		
	In	Pct	g/cc	In/hr	In/in	Pct	Pct					
3312B: Glendenning-----	0-7	5-15	1.40-1.65	0.60-2.00	0.12-0.14	0.0-2.9	1.0-2.0	.24	.24	4	8	0
	7-15	4-14	1.40-1.70	0.60-2.00	0.08-0.19	0.0-2.9	0.5-1.0	.24	.24			
	15-20	5-15	1.40-1.70	0.60-2.00	0.07-0.19	0.0-2.9	0.0-0.5	.17	.24			
	20-26	5-16	1.40-1.70	0.60-2.00	0.07-0.19	0.0-2.9	0.0-0.5	.17	.24			
	26-40	7-17	1.65-1.90	0.20-0.60	0.07-0.19	0.0-2.9	0.0-0.5	.17	.24			
	40-65	7-17	1.65-1.90	0.20-0.60	0.07-0.19	0.0-2.9	0.0-0.5	.17	.24			
	65-80	5-15	1.80-2.00	0.01-0.06	0.02-0.05	0.0-2.9	0.0-0.5	.17	.24			
3336A: Fenander-----	0-9	3-8	1.35-1.65	0.60-2.00	0.15-0.17	0.0-2.9	2.0-3.0	.28	.28	5	3	86
	9-15	5-15	1.40-1.70	0.60-2.00	0.12-0.22	0.0-2.9	0.5-1.0	.24	.24			
	15-27	10-18	1.50-1.70	0.60-2.00	0.12-0.19	0.0-2.9	0.5-1.0	.24	.24			
	27-33	10-18	1.50-1.70	0.60-2.00	0.12-0.19	0.0-2.9	0.5-1.0	.24	.24			
	33-80	5-20	1.40-1.80	0.20-0.60	0.08-0.16	0.0-2.9	0.0-0.5	.32	.32			
3403A: Loxley-----	0-13	0-0	0.30-0.40	6.00-20	0.55-0.65	---	70-90	.02	.02	3	8	0
	13-60	0-0	0.10-0.35	0.20-6.00	0.35-0.45	---	70-90	.02	.02			
Beseman-----	0-36	0-0	0.10-0.25	0.60-6.00	0.35-0.45	---	25-75	.02	.02	2	8	0
	36-60	8-25	1.35-1.60	0.20-0.60	0.09-0.22	0.0-2.9	0.5-1.0	.43	.43			
Dawson-----	0-8	0-0	0.15-0.30	6.00-20	0.55-0.65	---	65-85	.02	.02	2	8	0
	8-38	0-0	0.15-0.40	0.20-6.00	0.35-0.45	---	65-85	.02	.02			
	38-40	0-15	1.55-1.75	0.60-2.00	0.18-0.20	0.0-2.9	5.0-15	.37	.37			
	40-60	0-10	1.55-1.75	6.00-20	0.03-0.07	0.0-2.9	0.0-0.5	.15	.15			
3424C: Frogcreek-----	0-4	5-12	1.35-1.55	0.60-2.00	0.20-0.22	0.0-2.9	2.0-4.0	.37	.37	5	8	0
	4-13	5-12	1.45-1.65	0.60-2.00	0.20-0.22	0.0-2.9	1.0-2.0	.37	.37			
	13-19	6-16	1.65-1.85	0.20-0.60	0.07-0.20	0.0-2.9	0.0-0.5	.20	.28			
	19-32	7-18	1.65-1.85	0.20-0.60	0.07-0.19	0.0-2.9	0.0-0.5	.20	.28			
	32-46	7-18	1.65-1.85	0.20-0.60	0.07-0.19	0.0-2.9	0.0-0.5	.20	.28			
	46-80	2-10	1.85-2.00	0.06-0.20	0.02-0.05	0.0-2.9	0.0-0.5	.10	.17			
Magroc-----	0-2	5-17	1.35-1.55	0.60-2.00	0.20-0.22	0.0-2.9	1.0-3.0	.37	.37	3	5	56
	2-11	5-17	1.55-1.65	0.60-2.00	0.20-0.22	0.0-2.9	0.0-0.5	.37	.37			
	11-22	5-17	1.55-1.65	0.60-2.00	0.20-0.22	0.0-2.9	0.0-0.5	.37	.37			
	22-30	7-17	1.40-1.70	0.60-2.00	0.08-0.19	0.0-2.9	0.0-0.5	.32	.32			
	30-45	2-15	1.50-1.80	0.60-2.00	0.06-0.10	0.0-2.9	0.0-0.5	.17	.17			
	45-50	2-15	1.80-2.00	0.60-2.00	0.06-0.10	0.0-2.9	0.0-0.5	.17	.17			
	50-80	---	---	0.0000-20	---	---	---	---	---			
Stinnett-----	0-4	5-12	1.35-1.55	0.60-2.00	0.20-0.22	0.0-2.9	2.0-4.0	.37	.37	5	8	0
	4-7	0-12	1.40-1.65	0.60-2.00	0.20-0.22	0.0-2.9	0.0-0.5	.37	.37			
	7-18	0-12	1.40-1.65	0.60-2.00	0.20-0.22	0.0-2.9	0.0-0.5	.37	.37			
	18-29	8-17	1.45-1.65	0.60-2.00	0.20-0.22	0.0-2.9	0.0-0.5	.37	.37			
	29-34	6-16	1.65-1.85	0.20-0.60	0.07-0.19	0.0-2.9	0.0-0.5	.28	.28			
	34-41	7-18	1.65-1.85	0.20-0.60	0.07-0.19	0.0-2.9	0.0-0.5	.28	.28			
	41-55	2-10	1.65-1.85	0.20-0.60	0.07-0.19	0.0-2.9	0.0-0.5	.10	.17			
	55-80	2-10	1.85-2.00	0.06-0.20	0.02-0.05	0.0-2.9	0.0-0.5	.17	.17			
Rock outcrop.												
3446A: Newson-----	0-3	0-0	0.10-0.35	6.00-20	0.35-0.55	---	30-80	.02	.02	5	8	0
	3-8	1-4	1.35-1.65	6.00-20	0.07-0.12	0.0-2.9	10-20	.10	.10			
	8-16	1-4	1.70-1.80	6.00-20	0.06-0.11	0.0-2.9	0.1-2.0	.15	.17			
	16-22	1-4	1.70-1.80	6.00-20	0.06-0.11	0.0-2.9	0.1-2.0	.15	.17			
	22-60	1-4	1.70-1.80	6.00-20	0.05-0.15	0.0-2.9	0.0-0.5	.15	.15			

Table 24.--Physical Properties of the Soils--Continued

[illegible]

Table 25.--Chemical Properties of the Soils

(Absence of an entry indicates that data were not estimated)

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
<b>3A:</b>					
<b>Totagatic-----</b>	0-4	150-230	---	4.5-6.5	0
	4-8	1.0-3.0	---	4.5-6.5	0
	8-17	1.0-3.0	---	4.5-6.5	0
	17-28	1.0-3.0	---	4.5-6.5	0
	28-46	1.0-3.0	---	4.5-6.5	0
	46-70	1.0-3.0	---	4.5-6.5	0
	70-80	1.0-3.0	---	4.5-6.5	0
<b>Bowstring-----</b>	0-38	140-180	---	5.6-8.4	0
	38-47	1.0-3.0	---	5.6-8.4	0
	47-80	140-180	---	5.6-8.4	0
<b>Ausable-----</b>	0-10	150-230	---	5.1-7.3	0
	10-60	1.0-9.0	---	6.1-7.8	0
<b>22A:</b>					
<b>Comstock-----</b>	0-8	6.0-25	---	4.5-7.3	0
	8-15	---	3.0-20	4.5-6.0	0
	15-21	---	3.0-25	4.5-6.0	0
	21-34	---	4.0-25	4.5-6.0	0
	34-44	---	2.0-25	4.5-6.0	0
	44-60	2.0-15	2.0-25	5.1-7.3	0
<b>24A:</b>					
<b>Poskin-----</b>	0-9	6.0-20	---	4.5-7.3	0
	9-12	2.0-15	---	4.5-6.5	0
	12-19	3.0-20	---	4.5-6.5	0
	19-36	4.0-20	---	4.5-6.5	0
	36-39	0.0-15	---	4.5-6.5	0
	39-60	0.0-6.0	---	4.5-6.5	0
<b>27A:</b>					
<b>Scott Lake-----</b>	0-10	5.0-20	---	4.5-7.3	0
	10-17	1.0-15	---	4.5-6.5	0
	17-24	2.0-15	---	4.5-6.5	0
	24-31	0.0-10	---	4.5-6.5	0
	31-80	0.0-6.0	---	4.5-6.5	0
<b>28B:</b>					
<b>Haugen, very stony---</b>	0-4	3.0-17	---	4.5-6.5	0
	4-15	1.0-15	---	4.5-6.0	0
	15-23	1.0-15	---	4.5-6.0	0
	23-35	1.0-15	---	4.5-6.0	0
	35-49	1.0-15	---	5.6-6.5	0
	49-79	1.0-15	---	5.6-6.5	0
	79-80	1.0-15	---	5.6-6.5	0
<b>Haugen-----</b>	0-7	3.0-17	---	4.5-6.5	0
	7-15	1.0-15	---	4.5-6.0	0
	15-23	1.0-15	---	4.5-6.0	0
	23-35	1.0-15	---	4.5-6.0	0
	35-49	1.0-15	---	5.6-6.5	0
	49-79	1.0-15	---	5.6-6.5	0
	79-80	1.0-15	---	5.6-6.5	0

Table 25.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
28B:					
Rosholt, very stony--	0-4	3.0-15	---	4.5-7.3	0
	4-10	1.0-10	---	4.5-6.5	0
	10-14	1.0-10	---	4.5-6.5	0
	14-28	1.0-15	---	4.5-6.5	0
	28-34	1.0-10	---	4.5-6.5	0
	34-60	0.0-6.0	---	4.5-6.5	0
Rosholt-----	0-8	3.0-15	---	4.5-7.3	0
	8-10	1.0-10	---	4.5-6.5	0
	10-14	1.0-10	---	4.5-6.5	0
	14-28	1.0-15	---	4.5-6.5	0
	28-34	1.0-10	---	4.5-6.5	0
	34-60	0.0-6.0	---	4.5-6.5	0
28C:					
Haugen, very stony---	0-4	3.0-17	---	4.5-6.5	0
	4-15	1.0-15	---	4.5-6.0	0
	15-23	1.0-15	---	4.5-6.0	0
	23-35	1.0-15	---	4.5-6.0	0
	35-49	1.0-15	---	5.6-6.5	0
	49-79	1.0-15	---	5.6-6.5	0
	79-80	1.0-15	---	5.6-6.5	0
Haugen-----	0-7	3.0-17	---	4.5-6.5	0
	7-15	1.0-15	---	4.5-6.0	0
	15-23	1.0-15	---	4.5-6.0	0
	23-35	1.0-15	---	4.5-6.0	0
	35-49	1.0-15	---	5.6-6.5	0
	49-79	1.0-15	---	5.6-6.5	0
	79-80	1.0-15	---	5.6-6.5	0
Rosholt, very stony--	0-4	3.0-15	---	4.5-7.3	0
	4-10	1.0-10	---	4.5-6.5	0
	10-14	1.0-10	---	4.5-6.5	0
	14-28	1.0-15	---	4.5-6.5	0
	28-34	1.0-10	---	4.5-6.5	0
	34-60	0.0-6.0	---	4.5-6.5	0
Rosholt-----	0-8	3.0-15	---	4.5-7.3	0
	8-10	1.0-10	---	4.5-6.5	0
	10-14	1.0-10	---	4.5-6.5	0
	14-28	1.0-15	---	4.5-6.5	0
	28-34	1.0-10	---	4.5-6.5	0
	34-60	0.0-6.0	---	4.5-6.5	0
33B:					
Chetek-----	0-10	3.0-16	---	5.1-7.3	0
	10-16	1.0-15	---	5.1-6.0	0
	16-20	1.0-9.0	---	5.1-6.0	0
	20-60	1.0-3.0	---	5.1-6.5	0
33C:					
Chetek-----	0-10	3.0-16	---	5.1-7.3	0
	10-16	1.0-15	---	5.1-6.0	0
	16-20	1.0-9.0	---	5.1-6.0	0
	20-60	1.0-3.0	---	5.1-6.5	0



Table 25.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
<b>38A:</b>					
Rosholt-----	0-8	3.0-15	---	4.5-7.3	0
	8-10	1.0-10	---	4.5-6.5	0
	10-14	1.0-10	---	4.5-6.5	0
	14-28	1.0-15	---	4.5-6.5	0
	28-34	1.0-10	---	4.5-6.5	0
	34-60	0.0-6.0	---	4.5-6.5	0
<b>38B:</b>					
Rosholt-----	0-8	3.0-15	---	4.5-7.3	0
	8-10	1.0-10	---	4.5-6.5	0
	10-14	1.0-10	---	4.5-6.5	0
	14-28	1.0-15	---	4.5-6.5	0
	28-34	1.0-10	---	4.5-6.5	0
	34-60	0.0-6.0	---	4.5-6.5	0
<b>38C:</b>					
Rosholt-----	0-8	3.0-15	---	4.5-7.3	0
	8-10	1.0-10	---	4.5-6.5	0
	10-14	1.0-10	---	4.5-6.5	0
	14-28	1.0-15	---	4.5-6.5	0
	28-34	1.0-10	---	4.5-6.5	0
	34-60	0.0-6.0	---	4.5-6.5	0
<b>38D:</b>					
Rosholt-----	0-8	3.0-15	---	4.5-7.3	0
	8-10	1.0-10	---	4.5-6.5	0
	10-14	1.0-10	---	4.5-6.5	0
	14-28	1.0-15	---	4.5-6.5	0
	28-34	1.0-10	---	4.5-6.5	0
	34-60	0.0-6.0	---	4.5-6.5	0
<b>42D:</b>					
Amery-----	0-3	3.0-15	---	4.5-6.5	0
	3-22	---	1.0-15	4.5-6.0	0
	22-34	1.0-15	---	5.1-6.5	0
	34-41	1.0-15	---	5.1-6.5	0
	41-57	1.0-15	---	5.1-6.5	0
	57-71	1.0-15	---	5.1-6.5	0
	71-80	1.0-15	---	5.6-6.5	0
<b>43B:</b>					
Antigo-----	0-9	4.0-20	---	4.5-7.3	0
	9-12	3.0-15	---	4.5-6.5	0
	12-19	3.0-15	---	4.5-6.5	0
	19-28	3.0-15	---	4.5-6.5	0
	28-31	0.0-15	---	4.5-6.5	0
	31-33	0.0-15	---	4.5-6.5	0
	33-60	0.0-6.0	---	4.5-6.5	0
<b>43C:</b>					
Antigo-----	0-9	4.0-20	---	4.5-7.3	0
	9-12	3.0-15	---	4.5-6.5	0
	12-19	3.0-15	---	4.5-6.5	0
	19-28	3.0-15	---	4.5-6.5	0
	28-31	0.0-15	---	4.5-6.5	0
	31-33	0.0-15	---	4.5-6.5	0
	33-60	0.0-6.0	---	4.5-6.5	0

Table 25.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
43D:					
Antigo-----	0-9	4.0-20	---	4.5-7.3	0
	9-12	3.0-15	---	4.5-6.5	0
	12-19	3.0-15	---	4.5-6.5	0
	19-28	3.0-15	---	4.5-6.5	0
	28-31	0.0-15	---	4.5-6.5	0
	31-33	0.0-15	---	4.5-6.5	0
	33-60	0.0-6.0	---	4.5-6.5	0
48A:					
Brill-----	0-7	4.0-20	---	4.5-7.3	0
	7-11	3.0-20	---	4.5-6.5	0
	11-19	2.0-15	---	4.5-6.5	0
	19-34	4.0-25	---	4.5-6.5	0
	34-38	0.0-15	---	4.5-6.5	0
	38-60	0.0-6.0	---	4.5-6.5	0
63A:					
Crystal Lake-----	0-8	6.0-25	---	4.5-7.3	0
	8-12	2.0-20	---	4.5-7.3	0
	12-20	---	3.0-25	4.5-6.0	0
	20-32	---	4.0-25	4.5-6.0	0
	32-60	2.0-15	2.0-25	4.5-7.3	0
63B:					
Crystal Lake-----	0-8	6.0-25	---	4.5-7.3	0
	8-12	2.0-20	---	4.5-7.3	0
	12-20	---	3.0-25	4.5-6.0	0
	20-32	---	4.0-25	4.5-6.0	0
	32-60	2.0-15	2.0-25	4.5-7.3	0
63C:					
Crystal Lake-----	0-8	6.0-25	---	4.5-7.3	0
	8-12	2.0-20	---	4.5-7.3	0
	12-20	---	3.0-25	4.5-6.0	0
	20-32	---	4.0-25	4.5-6.0	0
	32-60	2.0-15	2.0-25	4.5-7.3	0
63E:					
Crystal Lake-----	0-8	6.0-25	---	4.5-7.3	0
	8-12	2.0-20	---	4.5-7.3	0
	12-20	---	3.0-25	4.5-6.0	0
	20-32	---	4.0-25	4.5-6.0	0
	32-60	2.0-15	2.0-25	4.5-7.3	0
64A:					
Totagatic-----	0-4	150-230	---	4.5-6.5	0
	4-8	1.0-3.0	---	4.5-6.5	0
	8-17	1.0-3.0	---	4.5-6.5	0
	17-28	1.0-3.0	---	4.5-6.5	0
	28-46	1.0-3.0	---	4.5-6.5	0
	46-70	1.0-3.0	---	4.5-6.5	0
	70-80	1.0-3.0	---	4.5-6.5	0
Winterfield-----	0-7	2.0-15	---	5.6-7.8	0
	7-60	1.0-5.0	---	5.6-8.4	0

Table 25.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
<b>69B:</b>					
Keweenaw-----	0-2	3.0-9.0	---	4.5-6.5	0
	2-4	3.0-12	---	4.5-6.5	0
	4-16	1.0-9.0	---	4.5-6.5	0
	16-20	0.0-15	---	4.5-6.5	0
	20-27	0.0-15	---	4.5-6.5	0
	27-43	0.0-15	---	4.5-6.5	0
	43-75	0.0-15	---	4.5-6.5	0
	75-80	0.0-15	---	5.1-6.5	0
Sayner-----	0-2	2.0-10	---	4.5-6.5	0
	2-4	1.0-6.0	---	4.5-6.5	0
	4-7	---	2.0-8.0	4.5-6.0	0
	7-14	---	2.0-8.0	4.5-6.0	0
	14-22	0.0-4.0	---	4.5-6.5	0
	22-60	0.0-6.0	---	4.5-6.5	0
Vilas-----	0-2	2.0-10	---	4.5-7.3	0
	2-4	1.0-6.0	---	4.5-6.5	0
	4-11	2.0-9.0	---	4.5-6.5	0
	11-23	0.0-5.0	---	4.5-6.5	0
	23-32	0.0-3.0	---	4.5-6.5	0
	32-80	0.0-3.0	---	4.5-6.5	0
<b>69C:</b>					
Keweenaw-----	0-2	3.0-9.0	---	4.5-6.5	0
	2-4	3.0-12	---	4.5-6.5	0
	4-16	1.0-9.0	---	4.5-6.5	0
	16-20	0.0-15	---	4.5-6.5	0
	20-27	0.0-15	---	4.5-6.5	0
	27-43	0.0-15	---	4.5-6.5	0
	43-75	0.0-15	---	4.5-6.5	0
	75-80	0.0-15	---	5.1-6.5	0
Sayner-----	0-2	2.0-10	---	4.5-6.5	0
	2-4	1.0-6.0	---	4.5-6.5	0
	4-7	---	2.0-8.0	4.5-6.0	0
	7-14	---	2.0-8.0	4.5-6.0	0
	14-22	0.0-4.0	---	4.5-6.5	0
	22-60	0.0-6.0	---	4.5-6.5	0
Vilas-----	0-2	2.0-10	---	4.5-7.3	0
	2-4	1.0-6.0	---	4.5-6.5	0
	4-11	2.0-9.0	---	4.5-6.5	0
	11-23	0.0-5.0	---	4.5-6.5	0
	23-32	0.0-3.0	---	4.5-6.5	0
	32-80	0.0-3.0	---	4.5-6.5	0
<b>69E:</b>					
Keweenaw-----	0-2	3.0-9.0	---	4.5-6.5	0
	2-4	3.0-12	---	4.5-6.5	0
	4-16	1.0-9.0	---	4.5-6.5	0
	16-20	0.0-15	---	4.5-6.5	0
	20-27	0.0-15	---	4.5-6.5	0
	27-43	0.0-15	---	4.5-6.5	0
	43-75	0.0-15	---	4.5-6.5	0
	75-80	0.0-15	---	5.1-6.5	0

Table 25.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
69E:					
Sayner-----	0-2	2.0-10	---	4.5-6.5	0
	2-4	1.0-6.0	---	4.5-6.5	0
	4-7	---	2.0-8.0	4.5-6.0	0
	7-14	---	2.0-8.0	4.5-6.0	0
	14-22	0.0-4.0	---	4.5-6.5	0
	22-60	0.0-6.0	---	4.5-6.5	0
Vilas-----	0-2	2.0-10	---	4.5-7.3	0
	2-4	1.0-6.0	---	4.5-6.5	0
	4-11	2.0-9.0	---	4.5-6.5	0
	11-23	0.0-5.0	---	4.5-6.5	0
	23-32	0.0-3.0	---	4.5-6.5	0
	32-80	0.0-3.0	---	4.5-6.5	0
74B:					
Vilas-----	0-2	2.0-10	---	4.5-7.3	0
	2-4	1.0-6.0	---	4.5-6.5	0
	4-11	2.0-9.0	---	4.5-6.5	0
	11-23	0.0-5.0	---	4.5-6.5	0
	23-32	0.0-3.0	---	4.5-6.5	0
	32-80	0.0-3.0	---	4.5-6.5	0
74C:					
Vilas-----	0-2	2.0-10	---	4.5-7.3	0
	2-4	1.0-6.0	---	4.5-6.5	0
	4-11	2.0-9.0	---	4.5-6.5	0
	11-23	0.0-5.0	---	4.5-6.5	0
	23-32	0.0-3.0	---	4.5-6.5	0
	32-80	0.0-3.0	---	4.5-6.5	0
74D:					
Vilas-----	0-2	2.0-10	---	4.5-7.3	0
	2-4	1.0-6.0	---	4.5-6.5	0
	4-11	2.0-9.0	---	4.5-6.5	0
	11-23	0.0-5.0	---	4.5-6.5	0
	23-32	0.0-3.0	---	4.5-6.5	0
	32-80	0.0-3.0	---	4.5-6.5	0
100B:					
Menahga-----	0-2	1.0-8.0	---	4.5-5.5	0
	2-25	---	2.0-4.0	4.5-5.5	0
	25-80	0.0-2.0	---	5.1-7.3	0
100C:					
Menahga-----	0-1	---	80-120	4.5-5.5	0
	1-2	1.0-8.0	---	4.5-5.5	0
	2-25	---	2.0-4.0	4.5-5.5	0
	25-80	0.0-2.0	---	5.1-7.3	0
100D:					
Menahga-----	0-1	---	80-120	4.5-5.5	0
	1-2	1.0-8.0	---	4.5-5.5	0
	2-25	---	2.0-4.0	4.5-5.5	0
	25-80	0.0-2.0	---	5.1-7.3	0

Table 25.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
127D:					
Amery-----	0-3	3.0-15	---	4.5-6.5	0
	3-22	---	1.0-15	4.5-6.0	0
	22-34	1.0-15	---	5.1-6.5	0
	34-41	1.0-15	---	5.1-6.5	0
	41-57	1.0-15	---	5.1-6.5	0
	57-71	1.0-15	---	5.1-6.5	0
	71-80	1.0-15	---	5.6-6.5	0
Rosholt-----	0-4	3.0-15	---	4.5-7.3	0
	4-10	1.0-10	---	4.5-6.5	0
	10-14	1.0-10	---	4.5-6.5	0
	14-28	1.0-15	---	4.5-6.5	0
	28-34	1.0-10	---	4.5-6.5	0
	34-60	0.0-6.0	---	4.5-6.5	0
127E:					
Amery-----	0-3	3.0-15	---	4.5-6.5	0
	3-22	---	1.0-15	4.5-6.0	0
	22-34	1.0-15	---	5.1-6.5	0
	34-41	1.0-15	---	5.1-6.5	0
	41-57	1.0-15	---	5.1-6.5	0
	57-71	1.0-15	---	5.1-6.5	0
	71-80	1.0-15	---	5.6-6.5	0
Rosholt-----	0-4	3.0-15	---	4.5-7.3	0
	4-10	1.0-10	---	4.5-6.5	0
	10-14	1.0-10	---	4.5-6.5	0
	14-28	1.0-15	---	4.5-6.5	0
	28-34	1.0-10	---	4.5-6.5	0
	34-60	0.0-6.0	---	4.5-6.5	0
156B:					
Magnor, very stony---	0-4	---	3.0-20	3.5-7.3	0
	4-11	---	1.0-15	3.5-6.0	0
	11-16	---	1.0-15	3.5-6.0	0
	16-21	---	1.0-15	3.5-6.0	0
	21-39	1.0-15	---	4.5-6.5	0
	39-58	1.0-15	---	4.5-6.5	0
	58-60	1.0-10	---	5.1-6.5	0
Magnor-----	0-8	---	3.0-20	3.5-7.3	0
	8-11	---	1.0-15	3.5-6.0	0
	11-16	---	1.0-15	3.5-6.0	0
	16-21	---	1.0-15	3.5-6.0	0
	21-39	1.0-15	---	4.5-6.5	0
	39-58	1.0-15	---	4.5-6.5	0
	58-60	1.0-10	---	5.1-6.5	0
157B:					
Freeon, very stony---	0-4	---	3.0-20	4.5-6.5	0
	4-19	1.0-15	---	4.5-6.5	0
	19-39	1.0-15	---	4.5-6.5	0
	39-53	1.0-10	---	4.5-6.5	0
	53-80	1.0-10	---	4.5-6.5	0
Freeon-----	0-4	---	3.0-20	3.5-7.3	0
	4-19	1.0-15	---	4.5-6.5	0
	19-39	1.0-15	---	4.5-6.5	0
	39-53	1.0-10	---	4.5-6.5	0
	53-80	1.0-10	---	4.5-6.5	0

Table 25.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
157C:					
Freeon, very stony---	0-4	---	3.0-20	4.5-6.5	0
	4-19	1.0-15	---	4.5-6.5	0
	19-39	1.0-15	---	4.5-6.5	0
	39-53	1.0-10	---	4.5-6.5	0
	53-80	1.0-10	---	4.5-6.5	0
Freeon-----	0-4	---	3.0-20	3.5-7.3	0
	4-19	1.0-15	---	4.5-6.5	0
	19-39	1.0-15	---	4.5-6.5	0
	39-53	1.0-10	---	4.5-6.5	0
	53-80	1.0-10	---	4.5-6.5	0
160A:					
Oesterle-----	0-7	6.0-20	---	4.5-6.5	0
	7-11	3.0-15	---	4.5-6.5	0
	11-31	1.0-10	---	4.5-6.5	0
	31-60	0.0-6.0	---	4.5-6.5	0
182B:					
Padus-----	0-2	3.0-15	---	4.5-7.3	0
	2-3	1.0-10	---	4.5-6.5	0
	3-19	---	3.0-15	4.5-6.0	0
	19-26	1.0-15	---	4.5-6.5	0
	26-38	1.0-15	---	4.5-6.5	0
	38-60	0.0-6.0	---	4.5-6.5	0
182C:					
Padus-----	0-2	3.0-15	---	4.5-7.3	0
	2-3	1.0-10	---	4.5-6.5	0
	3-19	---	3.0-15	4.5-6.0	0
	19-26	1.0-15	---	4.5-6.5	0
	26-38	1.0-15	---	4.5-6.5	0
	38-60	0.0-6.0	---	4.5-6.5	0
192A:					
Worcester-----	0-2	3.0-20	---	4.5-7.3	0
	2-3	---	3.0-15	4.5-6.0	0
	3-6	---	3.0-15	4.5-6.0	0
	6-16	---	3.0-15	4.5-6.0	0
	16-20	2.0-15	---	4.5-6.5	0
	20-32	2.0-15	---	4.5-6.5	0
	32-39	1.0-7.0	---	4.5-6.5	0
	39-60	0.0-6.0	---	4.5-6.5	0
193A:					
Minocqua-----	0-4	120-190	---	4.5-7.8	0
	4-15	2.0-20	---	4.5-7.8	0
	15-28	1.0-15	---	4.5-6.5	0
	28-60	0.0-6.0	---	4.5-6.5	0
215B:					
Pence-----	0-3	3.0-15	---	4.5-7.3	0
	3-8	1.0-15	---	4.5-7.3	0
	8-15	---	2.0-15	4.5-6.0	0
	15-21	0.0-10	---	4.5-6.5	0
	21-60	0.0-6.0	---	4.5-6.5	0

Table 25.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
215C:					
Pence-----	0-3	3.0-15	---	4.5-7.3	0
	3-8	1.0-15	---	4.5-7.3	0
	8-15	---	2.0-15	4.5-6.0	0
	15-21	0.0-10	---	4.5-6.5	0
	21-60	0.0-6.0	---	4.5-6.5	0
215D:					
Pence-----	0-3	3.0-15	---	4.5-7.3	0
	3-8	1.0-15	---	4.5-7.3	0
	8-15	---	2.0-15	4.5-6.0	0
	15-21	0.0-10	---	4.5-6.5	0
	21-60	0.0-6.0	---	4.5-6.5	0
315A:					
Rib-----	0-7	8.0-35	---	4.5-7.3	0
	7-10	2.0-15	---	4.5-7.3	0
	10-32	4.0-25	---	4.5-7.3	0
	32-35	1.0-20	---	4.5-7.3	0
	35-37	0.0-10	---	4.5-7.3	0
	37-60	0.0-6.0	---	5.5-8.4	0
337A:					
Plover-----	0-10	5.0-10	---	4.5-7.3	0
	10-13	---	2.0-15	4.5-6.5	0
	13-18	---	2.0-15	4.5-6.5	0
	18-32	---	2.0-15	4.5-6.5	0
	32-60	1.0-10	---	5.1-6.5	0
368B:					
Mahtomedi-----	0-5	2.0-11	---	5.1-6.5	0
	5-8	0.0-6.0	---	5.1-6.5	0
	8-15	0.0-6.0	---	5.1-6.5	0
	15-30	0.0-6.0	---	5.1-6.5	0
	30-60	0.0-6.0	---	5.1-7.8	0
Cress-----	0-3	2.0-20	---	4.5-7.3	0
	3-15	1.0-15	---	4.5-6.0	0
	15-31	---	0.0-7.0	4.5-6.0	0
	31-36	---	0.0-7.0	4.5-6.0	0
	36-60	0.0-6.0	---	4.5-6.5	0
368C:					
Mahtomedi-----	0-5	2.0-11	---	5.1-6.5	0
	5-8	0.0-6.0	---	5.1-6.5	0
	8-15	0.0-6.0	---	5.1-6.5	0
	15-30	0.0-6.0	---	5.1-6.5	0
	30-60	0.0-6.0	---	5.1-7.8	0
Cress-----	0-3	2.0-20	---	4.5-7.3	0
	3-15	1.0-15	---	4.5-6.0	0
	15-31	---	0.0-7.0	4.5-6.0	0
	31-36	---	0.0-7.0	4.5-6.0	0
	36-60	0.0-6.0	---	4.5-6.5	0
368D:					
Mahtomedi-----	0-5	2.0-11	---	5.1-6.5	0
	5-8	0.0-6.0	---	5.1-6.5	0
	8-15	0.0-6.0	---	5.1-6.5	0
	15-30	0.0-6.0	---	5.1-6.5	0
	30-60	0.0-6.0	---	5.1-7.8	0

Table 25.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
368D:					
Cress-----	0-3	2.0-20	---	4.5-7.3	0
	3-15	1.0-15	---	4.5-6.0	0
	15-31	---	0.0-7.0	4.5-6.0	0
	31-36	---	0.0-7.0	4.5-6.0	0
	36-60	0.0-6.0	---	4.5-6.5	0
371A:					
Croswell-----	0-1	2.0-10	---	4.5-7.3	0
	1-7	---	1.0-5.0	3.5-6.5	0
	7-16	---	1.0-4.0	4.5-7.3	0
	16-39	---	1.0-3.0	4.5-7.3	0
	39-60	1.0-2.0	---	5.1-8.4	0
380B:					
Cress-----	0-3	2.0-20	---	4.5-7.3	0
	3-15	1.0-15	---	4.5-6.0	0
	15-31	---	0.0-7.0	4.5-6.0	0
	31-36	---	0.0-7.0	4.5-6.0	0
	36-60	0.0-6.0	---	4.5-6.5	0
Rosholt-----	0-8	3.0-15	---	4.5-7.3	0
	8-10	1.0-10	---	4.5-6.5	0
	10-14	1.0-10	---	4.5-6.5	0
	14-28	1.0-15	---	4.5-6.5	0
	28-34	1.0-10	---	4.5-6.5	0
	34-60	0.0-6.0	---	4.5-6.5	0
380C:					
Cress-----	0-3	2.0-20	---	4.5-7.3	0
	3-15	1.0-15	---	4.5-6.0	0
	15-31	---	0.0-7.0	4.5-6.0	0
	31-36	---	0.0-7.0	4.5-6.0	0
	36-60	0.0-6.0	---	4.5-6.5	0
Rosholt-----	0-8	3.0-15	---	4.5-7.3	0
	8-10	1.0-10	---	4.5-6.5	0
	10-14	1.0-10	---	4.5-6.5	0
	14-28	1.0-15	---	4.5-6.5	0
	28-34	1.0-10	---	4.5-6.5	0
	34-60	0.0-6.0	---	4.5-6.5	0
380D:					
Cress-----	0-3	2.0-20	---	4.5-7.3	0
	3-15	1.0-15	---	4.5-6.0	0
	15-31	---	0.0-7.0	4.5-6.0	0
	31-36	---	0.0-7.0	4.5-6.0	0
	36-60	0.0-6.0	---	4.5-6.5	0
Rosholt-----	0-8	3.0-15	---	4.5-7.3	0
	8-10	1.0-10	---	4.5-6.5	0
	10-14	1.0-10	---	4.5-6.5	0
	14-28	1.0-15	---	4.5-6.5	0
	28-34	1.0-10	---	4.5-6.5	0
	34-60	0.0-6.0	---	4.5-6.5	0
383B:					
Mahtomedi-----	0-5	2.0-11	---	5.1-6.5	0
	5-8	0.0-6.0	---	5.1-6.5	0
	8-15	0.0-6.0	---	5.1-6.5	0
	15-30	0.0-6.0	---	5.1-6.5	0
	30-60	0.0-6.0	---	5.1-7.8	0



Table 25.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
383C:					
Mahtomedi-----	0-5	2.0-11	---	5.1-6.5	0
	5-8	0.0-6.0	---	5.1-6.5	0
	8-15	0.0-6.0	---	5.1-6.5	0
	15-30	0.0-6.0	---	5.1-6.5	0
	30-60	0.0-6.0	---	5.1-7.8	0
383D:					
Mahtomedi-----	0-5	2.0-11	---	5.1-6.5	0
	5-8	0.0-6.0	---	5.1-6.5	0
	8-15	0.0-6.0	---	5.1-6.5	0
	15-30	0.0-6.0	---	5.1-6.5	0
	30-60	0.0-6.0	---	5.1-7.8	0
396B:					
Friendship-----	0-4	---	1.0-4.0	4.5-7.3	0
	4-29	---	1.0-2.0	4.5-6.5	0
	29-60	---	1.0-2.0	4.5-6.5	0
Wurtsmith-----	0-6	---	2.0-14	3.5-5.5	0
	6-33	---	1.0-2.0	3.5-6.0	0
	33-60	---	1.0-2.0	3.5-7.3	0
Grayling-----	0-3	---	2.0-14	3.5-5.5	0
	3-15	---	1.0-4.0	3.5-5.5	0
	15-23	1.0-2.0	---	5.6-7.3	0
	23-60	1.0-2.0	---	5.6-7.3	0
397A:					
Perchlake-----	0-9	1.0-7.0	---	4.5-6.5	0
	9-18	1.0-4.0	---	4.5-6.5	0
	18-42	1.0-4.0	---	4.5-6.5	0
	42-46	---	2.0-15	4.5-6.5	0
	46-60	0.0-3.0	---	4.5-6.5	0
399B:					
Grayling-----	0-3	---	2.0-14	3.5-5.5	0
	3-15	---	1.0-4.0	3.5-5.5	0
	15-23	1.0-2.0	---	5.6-7.3	0
	23-60	1.0-2.0	---	5.6-7.3	0
399C:					
Grayling-----	0-3	---	2.0-14	3.5-5.5	0
	3-15	---	1.0-4.0	3.5-5.5	0
	15-23	1.0-2.0	---	5.6-7.3	0
	23-60	1.0-2.0	---	5.6-7.3	0
399D:					
Grayling-----	0-3	---	2.0-14	3.5-5.5	0
	3-15	---	1.0-4.0	3.5-5.5	0
	15-23	1.0-2.0	---	5.6-7.3	0
	23-60	1.0-2.0	---	5.6-7.3	0
405A:					
Lupton-----	0-65	140-180	---	5.6-7.8	0
Cathro-----	0-28	150-230	---	4.5-7.8	0
	28-49	2.0-20	---	5.6-7.3	5-25
	49-60	2.0-20	---	5.6-7.3	5-25
Tawas-----	0-31	160-190	---	4.5-7.8	0
	31-60	1.0-7.0	---	5.6-8.4	0

Table 25.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
406A:					
Loxley-----	0-13	---	50-100	3.5-4.4	0
	13-60	---	50-120	3.5-4.4	0
407A:					
Seelyeville-----	0-80	140-200	---	4.5-7.3	0
Markey-----	0-32	150-230	---	4.5-7.8	0
	32-60	1.0-3.0	---	5.6-8.4	0
410A:					
Seelyeville-----	0-80	140-200	---	4.5-7.3	0
Cathro-----	0-28	150-230	---	4.5-7.8	0
	28-49	2.0-20	---	5.6-7.3	5-25
	49-60	2.0-20	---	5.6-7.3	5-25
412A:					
Rifle-----	0-4	140-180	---	5.6-7.3	0
	4-60	140-180	---	5.6-7.3	0
Tacoosh-----	0-8	150-200	---	5.6-7.8	0
	8-40	150-200	---	5.6-7.8	0
	40-42	2.0-15	---	5.5-7.8	0
	42-60	2.0-15	---	5.5-8.4	0
415A:					
Greenwood-----	0-60	---	50-120	3.5-4.5	0
439B:					
Graycalm-----	0-3	---	4.0-10	3.5-6.5	0
	3-22	---	2.0-4.0	3.5-7.3	0
	22-35	---	1.0-5.0	3.5-7.3	0
	35-60	---	1.0-5.0	3.5-7.3	0
Menahga-----	0-1	---	80-120	4.5-5.5	0
	1-2	---	4.0-10	3.5-6.5	0
	2-25	---	2.0-4.0	4.5-5.5	0
	25-80	0.0-2.0	---	5.1-7.3	0
439C:					
Graycalm-----	0-3	---	4.0-10	3.5-6.5	0
	3-22	---	2.0-4.0	3.5-7.3	0
	22-35	---	1.0-5.0	3.5-7.3	0
	35-60	---	1.0-5.0	3.5-7.3	0
Menahga-----	0-1	---	80-120	4.5-5.5	0
	1-2	---	4.0-10	3.5-6.5	0
	2-25	---	2.0-4.0	4.5-5.5	0
	25-80	0.0-2.0	---	5.1-7.3	0
439D:					
Graycalm-----	0-3	---	4.0-10	3.5-6.5	0
	3-22	---	2.0-4.0	3.5-7.3	0
	22-35	---	1.0-5.0	3.5-7.3	0
	35-60	---	1.0-5.0	3.5-7.3	0
Menahga-----	0-1	---	80-120	4.5-5.5	0
	1-2	---	4.0-10	3.5-6.5	0
	2-25	---	2.0-4.0	4.5-5.5	0
	25-80	0.0-2.0	---	5.1-7.3	0

Table 25.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
<b>441C:</b>					
Freeon-----	0-4	---	3.0-20	3.5-7.3	0
	4-19	1.0-15	---	4.5-6.5	0
	19-39	1.0-15	---	4.5-6.5	0
	39-53	1.0-10	---	4.5-6.5	0
	53-80	1.0-10	---	4.5-6.5	0
Cathro-----	0-28	150-230	---	4.5-7.8	0
	28-49	2.0-20	---	5.6-7.3	5-25
	49-60	2.0-20	---	5.6-7.3	5-25
<b>442C:</b>					
Haugen-----	0-4	3.0-17	---	4.5-6.5	0
	4-15	1.0-15	---	4.5-6.0	0
	15-23	1.0-15	---	4.5-6.0	0
	23-35	1.0-15	---	4.5-6.0	0
	35-49	1.0-15	---	5.6-6.5	0
	49-79	1.0-15	---	5.6-6.5	0
	79-80	1.0-15	---	5.6-6.5	0
Greenwood-----	0-6	---	80-120	3.5-4.5	0
	6-60	---	150-200	3.5-4.5	0
<b>443D:</b>					
Amery-----	0-3	3.0-15	---	4.5-7.3	0
	3-22	---	1.0-15	4.5-6.0	0
	22-34	1.0-15	---	5.1-6.5	0
	34-41	1.0-15	---	5.1-6.5	0
	41-57	1.0-15	---	5.1-6.5	0
	57-71	1.0-15	---	5.1-6.5	0
	71-80	1.0-15	---	5.6-6.5	0
Greenwood-----	0-6	---	80-120	3.5-4.5	0
	6-60	---	150-200	3.5-4.5	0
<b>461A:</b>					
Bowstring-----	0-38	140-180	---	5.6-8.4	0
	38-47	1.0-3.0	---	5.6-8.4	0
	47-80	140-180	---	5.6-8.4	0
<b>484A:</b>					
Greenwood-----	0-6	---	80-120	3.5-4.5	0
	6-60	---	150-200	3.5-4.5	0
Beseman-----	0-36	---	50-150	3.5-4.4	0
	36-60	3.0-15	---	3.5-7.3	0
<b>495B:</b>					
Karlsborg-----	0-9	2.0-10	---	4.5-6.5	0
	9-28	2.0-10	---	4.5-6.5	0
	28-48	12-65	---	4.5-6.5	0
	48-80	1.0-5.0	---	4.5-6.5	0
Grettum-----	0-3	---	2.0-15	3.5-7.3	0
	3-32	---	1.0-10	3.5-7.3	0
	32-75	---	1.0-10	5.1-7.3	0
	75-80	1.0-9.0	---	5.1-7.3	0

Table 25.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
495B:					
Perida-----	0-9	2.0-10	---	3.5-7.3	0
	9-43	2.0-10	---	3.5-7.3	0
	43-45	2.0-10	---	3.5-7.3	0
	45-60	12-65	---	3.5-7.8	0
	60-74	12-65	---	3.5-7.8	0
	74-80	1.0-9.0	---	4.5-7.3	0
495C:					
Karlsborg-----	0-9	2.0-10	---	4.5-6.5	0
	9-28	2.0-10	---	4.5-6.5	0
	28-48	12-65	---	4.5-6.5	0
	48-80	1.0-5.0	---	4.5-6.5	0
Grettum-----	0-3	---	2.0-15	3.5-7.3	0
	3-32	---	1.0-10	3.5-7.3	0
	32-75	---	1.0-10	5.1-7.3	0
	75-80	1.0-9.0	---	5.1-7.3	0
Perida-----	0-9	2.0-10	---	3.5-7.3	0
	9-43	2.0-10	---	3.5-7.3	0
	43-45	2.0-10	---	3.5-7.3	0
	45-60	12-65	---	3.5-7.8	0
	60-74	12-65	---	3.5-7.8	0
	74-80	1.0-9.0	---	4.5-7.3	0
495D:					
Karlsborg-----	0-9	2.0-10	---	4.5-6.5	0
	9-28	2.0-10	---	4.5-6.5	0
	28-48	12-65	---	4.5-6.5	0
	48-80	1.0-5.0	---	4.5-6.5	0
Grettum-----	0-3	---	2.0-15	3.5-7.3	0
	3-32	---	1.0-10	3.5-7.3	0
	32-75	---	1.0-10	5.1-7.3	0
	75-80	1.0-9.0	---	5.1-7.3	0
Perida-----	0-9	2.0-10	---	3.5-7.3	0
	9-43	2.0-10	---	3.5-7.3	0
	43-45	2.0-10	---	3.5-7.3	0
	45-60	12-65	---	3.5-7.8	0
	60-74	12-65	---	3.5-7.8	0
	74-80	1.0-9.0	---	4.5-7.3	0
497A:					
Meenon-----	0-9	2.0-10	---	4.5-7.3	0
	9-28	1.0-10	---	4.5-7.3	0
	28-41	10-70	---	3.5-7.8	0
	41-80	0.0-7.0	---	4.5-6.5	0
515A:					
Manitowish-----	0-3	3.0-15	---	4.5-7.3	0
	3-4	1.0-15	---	4.5-7.3	0
	4-16	---	3.0-15	4.5-6.0	0
	16-19	3.0-15	---	4.5-6.5	0
	19-60	0.0-6.0	---	4.5-6.5	0

Table 25.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
521A:					
Dody-----	0-3	40-100	---	4.5-7.3	0
	3-9	6.0-50	---	4.5-7.3	0
	9-20	1.0-15	---	4.5-7.3	0
	20-23	1.0-15	---	4.5-7.3	0
	23-47	10-65	---	4.5-6.5	0
	47-58	1.0-15	---	4.5-6.5	0
	58-80	1.0-15	---	4.5-6.5	0
524E:					
Rock outcrop.					
Frogcreek-----	0-4	5.0-20	---	4.5-7.3	0
	4-13	---	3.0-15	4.5-6.0	0
	13-19	1.0-15	---	5.1-6.5	0
	19-32	1.0-15	---	5.1-6.5	0
	32-46	1.0-15	---	5.1-6.5	0
	46-80	0.0-10	---	6.1-7.3	0
Metonga-----	0-3	5.0-20	---	4.5-7.3	0
	3-4	---	2.0-15	3.6-6.0	0
	4-25	---	3.0-15	3.6-6.0	0
	25-28	1.0-9.0	---	5.1-6.5	0
	28-80	---	---	---	0
542B:					
Haugen, very stony---	0-4	3.0-17	---	4.5-6.5	0
	4-15	1.0-15	---	4.5-6.0	0
	15-23	1.0-15	---	4.5-6.0	0
	23-35	1.0-15	---	4.5-6.0	0
	35-49	1.0-15	---	5.6-6.5	0
	49-79	1.0-15	---	5.6-6.5	0
	79-80	1.0-15	---	5.6-6.5	0
Haugen-----	0-7	3.0-17	---	4.5-6.5	0
	7-15	1.0-15	---	4.5-6.0	0
	15-23	1.0-15	---	4.5-6.0	0
	23-35	1.0-15	---	4.5-6.0	0
	35-49	1.0-15	---	5.6-6.5	0
	49-79	1.0-15	---	5.6-6.5	0
	79-80	1.0-15	---	5.6-6.5	0
542C:					
Haugen, very stony---	0-4	3.0-17	---	4.5-6.5	0
	4-15	1.0-15	---	4.5-6.0	0
	15-23	1.0-15	---	4.5-6.0	0
	23-35	1.0-15	---	4.5-6.0	0
	35-49	1.0-15	---	5.6-6.5	0
	49-79	1.0-15	---	5.6-6.5	0
	79-80	1.0-15	---	5.6-6.5	0
Haugen-----	0-7	3.0-17	---	4.5-6.5	0
	7-15	1.0-15	---	4.5-6.0	0
	15-23	1.0-15	---	4.5-6.0	0
	23-35	1.0-15	---	4.5-6.0	0
	35-49	1.0-15	---	5.6-6.5	0
	49-79	1.0-15	---	5.6-6.5	0
	79-80	1.0-15	---	5.6-6.5	0

Table 25.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
543B:					
Anigon-----	0-10	4.0-20	---	4.5-7.3	0
	10-14	3.0-20	---	4.5-6.5	0
	14-20	4.0-25	---	4.5-6.5	0
	20-30	4.0-25	---	4.5-6.5	0
	30-34	1.0-15	---	4.5-6.5	0
	34-60	0.0-6.0	---	4.5-6.5	0
543C2:					
Anigon-----	0-10	4.0-20	---	4.5-7.3	0
	10-14	3.0-20	---	4.5-6.5	0
	14-20	4.0-25	---	4.5-6.5	0
	20-30	4.0-25	---	4.5-6.5	0
	30-34	1.0-15	---	4.5-6.5	0
	34-60	0.0-6.0	---	4.5-6.5	0
544F:					
Menahga-----	0-1	---	80-120	4.5-5.5	0
	1-2	1.0-8.0	---	4.5-5.5	0
	2-25	---	2.0-4.0	4.5-5.5	0
	25-80	0.0-2.0	---	5.1-7.3	0
Mahtomedi-----	0-5	2.0-11	---	5.1-6.5	0
	5-8	0.0-6.0	---	5.1-6.5	0
	8-15	0.0-6.0	---	5.1-6.5	0
	15-30	0.0-6.0	---	5.1-6.5	0
	30-60	0.0-6.0	---	5.1-7.8	0
555A:					
Fordum-----	0-6	10-45	---	4.5-8.4	0
	6-18	3.0-20	---	4.5-8.4	0
	18-30	3.0-20	---	4.5-8.4	0
	30-60	2.0-6.0	---	5.6-8.4	0
574B:					
Sayner-----	0-2	2.0-10	---	4.5-6.5	0
	2-4	1.0-6.0	---	4.5-6.5	0
	4-7	---	2.0-8.0	4.5-6.0	0
	7-14	---	2.0-8.0	4.5-6.0	0
	14-22	0.0-4.0	---	4.5-6.5	0
	22-60	0.0-6.0	---	4.5-6.5	0
574C:					
Sayner-----	0-2	2.0-10	---	4.5-6.5	0
	2-4	1.0-6.0	---	4.5-6.5	0
	4-7	---	2.0-8.0	4.5-6.0	0
	7-14	---	2.0-8.0	4.5-6.0	0
	14-22	0.0-4.0	---	4.5-6.5	0
	22-60	0.0-6.0	---	4.5-6.5	0
574E:					
Sayner-----	0-2	2.0-10	---	4.5-6.5	0
	2-4	1.0-6.0	---	4.5-6.5	0
	4-7	---	2.0-8.0	4.5-6.0	0
	7-14	---	2.0-8.0	4.5-6.0	0
	14-22	0.0-4.0	---	4.5-6.5	0
	22-60	0.0-6.0	---	4.5-6.5	0

Table 25.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
579B:					
Parkfalls-----	0-5	3.0-15	---	4.5-6.5	0
	5-8	---	2.0-15	4.5-6.5	0
	8-17	---	2.0-15	4.5-6.5	0
	17-30	1.0-15	---	4.5-6.5	0
	30-33	1.0-15	---	4.5-6.5	0
	33-48	2.0-15	---	4.5-6.5	0
	48-80	1.0-15	---	5.6-7.3	0
600A:					
Haplosaprists.					
Psammaquents.					
615B:					
Cress-----	0-3	2.0-20	---	4.5-7.3	0
	3-15	1.0-15	---	4.5-6.0	0
	15-31	---	0.0-7.0	4.5-6.0	0
	31-36	---	0.0-7.0	4.5-6.0	0
	36-60	0.0-6.0	---	4.5-6.5	0
615C:					
Cress-----	0-3	2.0-20	---	4.5-7.3	0
	3-15	1.0-15	---	4.5-6.0	0
	15-31	---	0.0-7.0	4.5-6.0	0
	31-36	---	0.0-7.0	4.5-6.0	0
	36-60	0.0-6.0	---	4.5-6.5	0
615D:					
Cress-----	0-3	2.0-20	---	4.5-7.3	0
	3-15	1.0-15	---	4.5-6.0	0
	15-31	---	0.0-7.0	4.5-6.0	0
	31-36	---	0.0-7.0	4.5-6.0	0
	36-60	0.0-6.0	---	4.5-6.5	0
623A:					
Capitola-----	0-5	100-155	---	4.5-7.3	0
	5-7	8.0-35	---	4.5-7.3	0
	7-22	3.0-15	---	4.5-7.3	0
	22-33	2.0-15	---	4.5-7.3	0
	33-60	1.0-10	---	5.1-7.8	0
624A:					
Ossmer-----	0-4	6.0-20	---	4.5-7.3	0
	4-6	1.0-15	---	4.5-6.5	0
	6-11	1.0-15	---	4.5-6.5	0
	11-26	1.0-15	---	4.5-6.5	0
	26-34	1.0-15	---	4.5-6.5	0
	34-38	1.0-15	---	4.5-6.5	0
	38-60	0.0-6.0	---	4.5-6.5	0
632A:					
Aftad-----	0-10	3.0-10	---	4.5-7.3	0
	10-29	2.0-10	---	4.5-6.5	0
	29-36	2.0-15	---	4.5-6.5	0
	36-41	2.0-15	---	4.5-6.5	0
	41-60	1.0-10	---	5.1-6.5	0

Table 25.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
632B:					
Aftad-----	0-10	3.0-10	---	4.5-7.3	0
	10-29	2.0-10	---	4.5-6.5	0
	29-36	2.0-15	---	4.5-6.5	0
	36-41	2.0-15	---	4.5-6.5	0
	41-60	1.0-10	---	5.1-6.5	0
632C:					
Aftad-----	0-10	3.0-10	---	4.5-7.3	0
	10-29	2.0-10	---	4.5-6.5	0
	29-36	2.0-15	---	4.5-6.5	0
	36-41	2.0-15	---	4.5-6.5	0
	41-60	1.0-10	---	5.1-6.5	0
633F:					
Pence-----	0-3	3.0-15	---	4.5-7.3	0
	3-8	1.0-15	---	4.5-7.3	0
	8-15	---	2.0-15	4.5-6.0	0
	15-21	0.0-10	---	4.5-6.5	0
	21-60	0.0-6.0	---	4.5-6.5	0
Padus-----	0-2	3.0-15	---	4.5-7.3	0
	2-3	1.0-10	---	4.5-6.5	0
	3-19	---	3.0-15	4.5-6.0	0
	19-26	1.0-15	---	4.5-6.5	0
	26-38	1.0-15	---	4.5-6.5	0
	38-60	0.0-6.0	---	4.5-6.5	0
648B:					
Sconsin-----	0-4	8.3-13	---	4.5-7.3	0
	4-5	4.6-12	---	4.5-6.5	0
	5-10	4.6-12	---	4.5-6.5	0
	10-18	4.6-12	---	4.5-6.5	0
	18-27	4.6-12	---	4.5-6.5	0
	27-34	5.5-14	---	4.5-6.5	0
	34-38	4.8-12	---	4.5-6.5	0
	38-60	1.0-5.5	---	4.5-6.5	0
670C:					
Keweenaw-----	0-2	3.0-15	---	4.5-6.5	0
	2-4	3.0-12	---	4.5-6.5	0
	4-16	1.0-9.0	---	4.5-6.5	0
	16-20	0.0-15	---	4.5-6.5	0
	20-27	0.0-15	---	4.5-6.5	0
	27-43	0.0-15	---	4.5-6.5	0
	43-75	0.0-15	---	4.5-6.5	0
	75-80	0.0-15	---	5.1-6.5	0
Pence-----	0-3	3.0-15	---	4.5-7.3	0
	3-8	1.0-15	---	4.5-7.3	0
	8-15	---	2.0-15	4.5-6.0	0
	15-21	0.0-10	---	4.5-6.5	0
	21-60	0.0-6.0	---	4.5-6.5	0



Table 25.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
670E:					
Keweenaw-----	0-2	3.0-15	---	4.5-6.5	0
	2-4	3.0-12	---	4.5-6.5	0
	4-16	1.0-9.0	---	4.5-6.5	0
	16-20	0.0-15	---	4.5-6.5	0
	20-27	0.0-15	---	4.5-6.5	0
	27-43	0.0-15	---	4.5-6.5	0
	43-75	0.0-15	---	4.5-6.5	0
	75-80	0.0-15	---	5.1-6.5	0
Pence-----	0-3	3.0-15	---	4.5-7.3	0
	3-8	1.0-15	---	4.5-7.3	0
	8-15	---	2.0-15	4.5-6.0	0
	15-21	0.0-10	---	4.5-6.5	0
	21-60	0.0-6.0	---	4.5-6.5	0
671B:					
Spoonerhill, stony---	0-3	2.0-15	---	4.5-7.3	0
	3-12	0.0-15	---	4.5-6.5	0
	12-16	0.0-15	---	4.5-6.5	0
	16-34	0.0-15	---	5.1-6.5	0
	34-46	0.0-15	---	5.6-6.5	0
	46-80	0.0-15	---	5.6-6.5	0
Spoonerhill-----	0-3	2.0-15	---	4.5-7.3	0
	3-12	0.0-15	---	4.5-6.5	0
	12-16	0.0-15	---	4.5-6.5	0
	16-34	0.0-15	---	5.1-6.5	0
	34-46	0.0-15	---	5.6-6.5	0
	46-80	0.0-15	---	5.6-6.5	0
680B:					
Stanberry, stony-----	0-1	60-160	---	4.5-6.5	0
	1-3	4.0-10	---	4.5-6.5	0
	3-19	4.0-11	---	4.5-6.5	0
	19-24	4.0-9.0	---	4.5-6.5	0
	24-32	5.0-10	---	4.5-6.5	0
	32-42	3.0-6.0	---	4.5-6.5	0
	42-80	1.0-6.0	---	5.6-7.3	0
Pence, stony-----	0-3	3.0-15	---	4.5-7.3	0
	3-8	1.0-15	---	4.5-7.3	0
	8-15	---	2.0-15	4.5-6.0	0
	15-21	0.0-10	---	4.5-6.5	0
	21-60	0.0-6.0	---	4.5-6.5	0
683A:					
Tipler-----	0-3	5.0-15	---	4.5-7.3	0
	3-5	4.0-10	---	4.5-6.5	0
	5-19	---	2.0-15	4.5-6.0	0
	19-26	1.0-15	---	5.1-6.5	0
	26-33	1.0-15	---	5.1-6.5	0
	33-60	0.0-6.0	---	4.5-6.5	0
706A:					
Winterfield-----	0-7	2.0-15	---	5.6-7.8	0
	7-60	1.0-5.0	---	5.6-8.4	0

Table 25.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
706A: Totagatic-----	0-4	3.0-10	---	5.1-6.5	0
	4-8	1.0-3.0	---	4.5-6.5	0
	8-17	1.0-3.0	---	4.5-6.5	0
	17-28	1.0-3.0	---	4.5-6.5	0
	28-46	1.0-3.0	---	4.5-6.5	0
	46-70	1.0-3.0	---	4.5-6.5	0
	70-80	1.0-3.0	---	4.5-6.5	0
724A: Rib-----	0-7	8.0-35	---	4.5-7.3	0
	7-10	2.0-15	---	4.5-7.3	0
	10-32	4.0-25	---	4.5-7.3	0
	32-35	1.0-20	---	4.5-7.3	0
	35-37	0.0-10	---	4.5-7.3	0
	37-60	0.0-6.0	---	5.5-8.4	0
Rock outcrop.					
726B: Sissabagama-----	0-10	---	2.0-15	4.5-7.3	0
	10-31	---	1.0-10	4.5-6.5	0
	31-45	2.0-4.0	---	4.5-6.5	0
	45-80	2.0-4.0	---	5.1-7.3	0
733A: Wozny-----	0-3	100-155	---	4.5-7.3	0
	3-17	8.0-35	---	4.5-7.3	0
	17-37	3.0-15	---	4.5-7.3	0
	37-56	2.0-15	---	5.1-7.3	0
	56-80	0.0-10	---	5.1-6.5	0
771A: Lenroot-----	0-4	2.0-11	---	5.1-6.5	0
	4-8	0.0-6.0	---	5.1-6.5	0
	8-14	0.0-6.0	---	5.1-6.5	0
	14-21	0.0-6.0	---	5.1-6.5	0
	21-80	0.0-6.0	---	5.1-7.3	0
827A: Scoba-----	0-9	5.0-20	---	4.5-7.3	0
	9-16	1.0-15	---	4.5-6.5	0
	16-20	2.0-15	---	4.5-6.5	0
	20-26	2.0-15	---	4.5-6.5	0
	26-31	0.0-10	---	4.5-6.5	0
	31-60	0.0-6.0	---	4.5-6.5	0
853C: Frogcreek-----	0-4	5.0-20	---	4.5-7.3	0
	4-13	---	3.0-15	4.5-6.0	0
	13-19	1.0-15	---	5.1-6.5	0
	19-32	1.0-15	---	5.1-6.5	0
	32-46	1.0-15	---	5.1-6.5	0
	46-80	0.0-10	---	6.1-7.3	0

Table 25.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
853C:					
Stinnett-----	0-4	6.0-20	---	4.5-7.3	0
	4-7	---	3.0-15	4.5-6.0	0
	7-18	---	3.0-15	4.5-6.0	0
	18-29	---	3.0-15	4.5-6.0	0
	29-34	1.0-10	---	4.5-6.5	0
	34-41	1.0-10	---	4.5-6.5	0
	41-55	0.0-10	---	5.6-7.3	0
	55-80	0.0-15	---	5.6-7.3	0
Wozny-----	0-3	100-155	---	4.5-7.3	0
	3-17	8.0-35	---	4.5-7.3	0
	17-37	3.0-15	---	4.5-7.3	0
	37-56	2.0-15	---	5.1-7.3	0
	56-80	0.0-10	---	5.1-6.5	0
856B:					
Stinnett-----	0-4	6.0-20	---	4.5-7.3	0
	4-7	---	3.0-15	4.5-6.0	0
	7-18	---	3.0-15	4.5-6.0	0
	18-29	---	3.0-15	4.5-6.0	0
	29-34	1.0-10	---	4.5-6.5	0
	34-41	1.0-10	---	4.5-6.5	0
	41-55	0.0-10	---	5.6-7.3	0
	55-80	0.0-15	---	5.6-7.3	0
857B:					
Frogcreek-----	0-4	5.0-20	---	4.5-7.3	0
	4-13	---	3.0-15	4.5-6.0	0
	13-19	1.0-15	---	5.1-6.5	0
	19-32	1.0-15	---	5.1-6.5	0
	32-46	1.0-15	---	5.1-6.5	0
	46-80	0.0-10	---	6.1-7.3	0
857C:					
Frogcreek-----	0-4	5.0-20	---	4.5-7.3	0
	4-13	---	3.0-15	4.5-6.0	0
	13-19	1.0-15	---	5.1-6.5	0
	19-32	1.0-15	---	5.1-6.5	0
	32-46	1.0-15	---	5.1-6.5	0
	46-80	0.0-10	---	6.1-7.3	0
873B:					
Stanberry-----	0-1	60-160	---	4.5-6.5	0
	1-3	4.0-10	---	4.5-6.5	0
	3-19	4.0-11	---	4.5-6.5	0
	19-24	4.0-9.0	---	4.5-6.5	0
	24-32	5.0-10	---	4.5-6.5	0
	32-42	3.0-6.0	---	4.5-6.5	0
	42-80	1.0-6.0	---	5.6-7.3	0
873C:					
Stanberry-----	0-1	60-160	---	4.5-6.5	0
	1-3	4.0-10	---	4.5-6.5	0
	3-19	4.0-11	---	4.5-6.5	0
	19-24	4.0-9.0	---	4.5-6.5	0
	24-32	5.0-10	---	4.5-6.5	0
	32-42	3.0-6.0	---	4.5-6.5	0
	42-80	1.0-6.0	---	5.6-7.3	0

Table 25.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
873D:					
Stanberry-----	0-1	60-160	---	4.5-6.5	0
	1-3	4.0-10	---	4.5-6.5	0
	3-19	4.0-11	---	4.5-6.5	0
	19-24	4.0-9.0	---	4.5-6.5	0
	24-32	5.0-10	---	4.5-6.5	0
	32-42	3.0-6.0	---	4.5-6.5	0
	42-80	1.0-6.0	---	5.6-7.3	0
905A:					
Cublake-----	0-3	1.0-8.0	---	4.5-6.5	0
	3-4	---	0.0-10	3.5-6.0	0
	4-23	---	2.0-10	3.5-6.0	0
	23-32	---	0.0-5.0	3.1-7.3	0
	32-40	---	0.0-5.0	3.1-7.3	0
	40-48	---	0.0-5.0	3.1-7.3	0
	48-60	2.0-20	---	5.1-7.3	0
926A:					
Flink-----	0-3	1.0-8.0	---	4.5-6.5	0
	3-6	---	2.0-10	3.5-6.0	0
	6-9	---	2.0-10	3.5-6.0	0
	9-26	---	2.0-10	3.5-6.0	0
	26-35	0.0-3.0	---	5.1-7.3	0
	35-46	0.0-3.0	---	5.1-7.3	0
	46-52	2.0-20	---	5.1-7.3	0
	52-80	2.0-20	---	5.1-7.3	0
943D:					
Stanberry-----	0-1	60-160	---	4.5-6.5	0
	1-3	4.0-10	---	4.5-6.5	0
	3-19	4.0-11	---	4.5-6.5	0
	19-24	4.0-9.0	---	4.5-6.5	0
	24-32	5.0-10	---	4.5-6.5	0
	32-42	3.0-6.0	---	4.5-6.5	0
	42-80	1.0-6.0	---	5.6-7.3	0
Greenwood-----	0-6	---	80-120	3.5-4.5	0
	6-60	---	150-200	3.5-4.5	0
948A:					
Billyboy-----	0-4	6.0-20	---	4.5-7.3	0
	4-11	1.0-15	---	4.5-6.5	0
	11-20	1.0-15	---	4.5-6.5	0
	20-26	2.0-15	---	4.5-6.5	0
	26-30	2.0-15	---	4.5-6.5	0
	30-35	2.0-10	---	4.5-6.5	0
	35-60	0.0-6.0	---	4.5-6.5	0
970C:					
Keweenaw-----	0-2	3.0-15	---	4.5-6.5	0
	2-4	3.0-12	---	4.5-6.5	0
	4-16	1.0-9.0	---	4.5-6.5	0
	16-20	0.0-15	---	4.5-6.5	0
	20-27	0.0-15	---	4.5-6.5	0
	27-43	0.0-15	---	4.5-6.5	0
	43-75	0.0-15	---	4.5-6.5	0
	75-80	0.0-15	---	5.1-6.5	0

Table 25.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
970C:					
Pence-----	0-3	3.0-15	---	4.5-7.3	0
	3-8	1.0-15	---	4.5-7.3	0
	8-15	---	2.0-15	4.5-6.0	0
	15-21	0.0-10	---	4.5-6.5	0
	21-60	0.0-6.0	---	4.5-6.5	0
Greenwood-----	0-6	---	80-120	3.5-4.5	0
	6-60	---	150-200	3.5-4.5	0
970E:					
Keweenaw-----	0-2	3.0-15	---	4.5-6.5	0
	2-4	3.0-12	---	4.5-6.5	0
	4-16	1.0-9.0	---	4.5-6.5	0
	16-20	0.0-15	---	4.5-6.5	0
	20-27	0.0-15	---	4.5-6.5	0
	27-43	0.0-15	---	4.5-6.5	0
	43-75	0.0-15	---	4.5-6.5	0
	75-80	0.0-15	---	5.1-6.5	0
Pence-----	0-3	3.0-15	---	4.5-7.3	0
	3-8	1.0-15	---	4.5-7.3	0
	8-15	---	2.0-15	4.5-6.0	0
	15-21	0.0-10	---	4.5-6.5	0
	21-60	0.0-6.0	---	4.5-6.5	0
Greenwood-----	0-6	---	80-120	3.5-4.5	0
	6-60	---	150-200	3.5-4.5	0
1070C:					
Fremstadt-----	0-5	3.0-15	---	4.5-7.3	0
	5-33	2.0-10	---	4.5-6.5	0
	33-37	1.0-10	---	4.5-6.5	0
	37-45	1.0-10	---	4.5-6.5	0
	45-70	1.0-10	---	5.6-6.5	0
	70-80	1.0-10	---	5.6-6.5	0
Cress-----	0-3	2.0-20	---	4.5-7.3	0
	3-15	1.0-15	---	4.5-6.0	0
	15-31	---	0.0-7.0	4.5-6.0	0
	31-36	---	0.0-7.0	4.5-6.0	0
	36-60	0.0-6.0	---	4.5-6.5	0
1070D:					
Fremstadt-----	0-5	3.0-15	---	4.5-7.3	0
	5-33	2.0-10	---	4.5-6.5	0
	33-37	1.0-10	---	4.5-6.5	0
	37-45	1.0-10	---	4.5-6.5	0
	45-70	1.0-10	---	5.6-6.5	0
	70-80	1.0-10	---	5.6-6.5	0
Cress-----	0-3	2.0-20	---	4.5-7.3	0
	3-15	1.0-15	---	4.5-6.0	0
	15-31	---	0.0-7.0	4.5-6.0	0
	31-36	---	0.0-7.0	4.5-6.0	0
	36-60	0.0-6.0	---	4.5-6.5	0

Table 25.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
1080B:					
Spoonerhill-----	0-3	2.0-15	---	4.5-7.3	0
	3-12	0.0-15	---	4.5-6.5	0
	12-16	0.0-15	---	4.5-6.5	0
	16-34	0.0-15	---	5.1-6.5	0
	34-46	0.0-15	---	5.6-6.5	0
	46-80	0.0-15	---	5.6-6.5	0
Spoonerhill, stony---	0-3	2.0-15	---	4.5-7.3	0
	3-12	0.0-15	---	4.5-6.5	0
	12-16	0.0-15	---	4.5-6.5	0
	16-34	0.0-15	---	5.1-6.5	0
	34-46	0.0-15	---	5.6-6.5	0
	46-80	0.0-15	---	5.6-6.5	0
Cress-----	0-3	2.0-20	---	4.5-7.3	0
	3-15	1.0-15	---	4.5-6.0	0
	15-31	---	0.0-7.0	4.5-6.0	0
	31-36	---	0.0-7.0	4.5-6.0	0
	36-60	0.0-6.0	---	4.5-6.5	0
1653C:					
Stanberry-----	0-1	60-160	---	4.5-6.5	0
	1-3	4.0-10	---	4.5-6.5	0
	3-19	4.0-11	---	4.5-6.5	0
	19-24	4.0-9.0	---	4.5-6.5	0
	24-32	5.0-10	---	4.5-6.5	0
	32-42	3.0-6.0	---	4.5-6.5	0
	42-80	1.0-6.0	---	5.6-7.3	0
Parkfalls-----	0-5	3.0-15	---	4.5-6.5	0
	5-8	---	2.0-15	4.5-6.5	0
	8-17	---	2.0-15	4.5-6.5	0
	17-30	1.0-15	---	4.5-6.5	0
	30-33	1.0-15	---	4.5-6.5	0
	33-48	2.0-15	---	4.5-6.5	0
	48-80	1.0-15	---	5.6-7.3	0
Wozny-----	0-3	100-155	---	4.5-7.3	0
	3-17	8.0-35	---	4.5-7.3	0
	17-37	3.0-15	---	4.5-7.3	0
	37-56	2.0-15	---	5.1-7.3	0
	56-80	0.0-10	---	5.1-6.5	0
2015. Pits					
2050. Landfill					
3011A:					
Barronett-----	0-9	7.0-30	---	4.5-7.3	0
	9-16	1.0-15	---	4.5-6.5	0
	16-34	4.0-20	---	4.5-6.5	0
	34-60	2.0-15	2.0-25	5.1-7.3	0
3125A:					
Meehan-----	0-5	---	2.0-15	3.5-7.3	0
	5-8	---	1.0-8.0	3.5-6.5	0
	8-28	---	1.0-8.0	3.5-6.5	0
	28-60	---	0.0-4.0	3.5-7.3	0

Table 25.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
3126A:					
Wurtsmith-----	0-9	---	2.0-14	3.5-5.5	0
	9-37	---	1.0-2.0	3.5-6.0	0
	37-60	---	1.0-2.0	3.5-7.3	0
3276A:					
Au Gres-----	0-2	---	80-120	4.5-7.3	0
	2-5	---	2.0-5.0	3.5-7.3	0
	5-8	---	2.0-5.0	4.5-6.0	0
	8-16	---	2.0-5.0	4.5-6.5	0
	16-28	---	2.0-5.0	3.5-7.3	0
	28-60	1.0-2.0	---	4.5-7.3	0
3312B:					
Glendenning, very stony-----	0-5	3.0-17	---	5.1-7.3	0
	5-15	1.0-15	---	5.1-6.0	0
	15-20	1.0-15	---	5.1-6.5	0
	20-26	1.0-15	---	5.1-6.5	0
	26-40	1.0-15	---	5.1-6.5	0
	40-65	1.0-15	---	5.1-6.5	0
	65-80	1.0-15	---	6.1-7.3	0
Glendenning-----	0-7	3.0-17	---	5.1-7.3	0
	7-15	1.0-15	---	5.1-6.0	0
	15-20	1.0-15	---	5.1-6.5	0
	20-26	1.0-15	---	5.1-6.5	0
	26-40	1.0-15	---	5.1-6.5	0
	40-65	1.0-15	---	5.1-6.5	0
	65-80	1.0-15	---	6.1-7.3	0
3336A:					
Fenander-----	0-9	5.0-10	---	5.1-7.3	0
	9-15	2.0-15	---	5.1-7.3	0
	15-27	2.0-15	---	5.1-7.3	0
	27-33	2.0-15	---	5.1-7.3	0
	33-80	2.0-20	---	5.1-7.3	0
3403A:					
Loxley-----	0-13	---	50-100	3.5-4.4	0
	13-60	---	50-120	3.5-4.4	0
Beseman-----	0-36	---	50-150	3.5-4.4	0
	36-60	3.0-15	---	3.5-7.3	0
Dawson-----	0-8	---	80-120	3.5-4.4	0
	8-38	---	150-230	3.5-4.4	0
	38-40	10-25	---	3.5-4.4	0
	40-60	1.0-2.0	---	3.5-6.5	0
3424C:					
Frogcreek-----	0-4	5.0-20	---	4.5-7.3	0
	4-13	---	3.0-15	4.5-6.0	0
	13-19	1.0-15	---	5.1-6.5	0
	19-32	1.0-15	---	5.1-6.5	0
	32-46	1.0-15	---	5.1-6.5	0
	46-80	0.0-10	---	6.1-7.3	0

Table 25.--Chemical Properties of the Soils--Continued

Map symbol and soil name	Depth	Cation- exchange capacity	Effective cation- exchange capacity	Soil reaction	Calcium carbon- ate
	In	meq/100 g	meq/100 g	pH	Pct
3424C:					
Magroc-----	0-2	3.0-20	---	4.5-7.3	0
	2-11	1.0-15	---	4.5-6.5	0
	11-22	1.0-15	---	4.5-6.5	0
	22-30	1.0-15	---	4.5-6.5	0
	30-45	0.0-15	---	5.1-7.3	0
	45-50	0.0-15	---	5.1-7.3	0
	50-80	---	---	---	0
Stinnett-----	0-4	6.0-20	---	4.5-7.3	0
	4-7	---	3.0-15	4.5-6.0	0
	7-18	---	3.0-15	4.5-6.0	0
	18-29	---	3.0-15	4.5-6.0	0
	29-34	1.0-10	---	4.5-6.5	0
	34-41	1.0-10	---	4.5-6.5	0
	41-55	0.0-10	---	5.6-7.3	0
	55-80	0.0-15	---	5.6-7.3	0
Rock outcrop.					
3446A:					
Newson-----	0-3	---	60-155	3.5-6.0	0
	3-8	---	1.0-7.0	3.5-6.0	0
	8-16	---	1.0-7.0	3.5-6.0	0
	16-22	---	1.0-7.0	3.5-6.0	0
	22-60	0.0-4.0	---	4.5-6.5	0
3448B:					
Grettum-----	0-3	---	2.0-15	3.5-7.3	0
	3-32	---	1.0-10	3.5-7.3	0
	32-75	---	1.0-10	5.1-7.3	0
	75-80	1.0-9.0	---	5.1-7.3	0
3448C:					
Grettum-----	0-3	---	2.0-15	3.5-7.3	0
	3-32	---	1.0-10	3.5-7.3	0
	32-75	---	1.0-10	5.1-7.3	0
	75-80	1.0-9.0	---	5.1-7.3	0
3516A:					
Slimlake-----	0-6	3.0-15	---	5.1-6.5	0
	6-17	---	3.0-15	5.1-6.5	0
	17-42	0.0-2.0	---	5.1-6.5	0
	42-53	0.0-2.0	---	5.1-6.5	0
	53-80	0.0-2.0	---	5.1-6.5	0
3629B:					
Perida-----	0-9	2.0-10	---	3.5-7.3	0
	9-43	2.0-10	---	3.5-7.3	0
	43-45	2.0-10	---	3.5-7.3	0
	45-60	12-65	---	3.5-7.8	0
	60-74	12-65	---	3.5-7.8	0
	74-80	1.0-9.0	---	4.5-7.3	0
M-W.					
Miscellaneous water					
W.					
Water					



Table 26.---Soil Moisture Status by Depth

(Depths of layers are in feet. Absence of an entry indicates that the feature is not a concern or that data were not estimated. See terms used in this table)

Map symbol and soil name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October
3A:											
Totagatic-----	A/D	0.0-2.0: Moist	0.0-2.5: Moist	0.0-1.0: Moist	0.0-6.7: Wet	0.0-6.7: Wet	0.0-1.0: Moist	0.0-2.0: Moist	0.0-2.5: Moist	0.0-1.5: Moist	0.0-0.5: Moist
		2.0-6.7: Wet	2.5-6.7: Wet	1.0-6.7: Wet	---	---	1.0-6.7: Wet	2.0-6.7: Wet	2.5-6.7: Wet	1.5-6.7: Wet	0.5-6.7: Wet
Bowstring-----	A/D	0.0-2.0: Moist	0.0-2.5: Moist	0.0-1.0: Moist	0.0-6.7: Wet	0.0-6.7: Wet	0.0-1.0: Moist	0.0-2.0: Moist	0.0-2.5: Moist	0.0-1.5: Moist	0.0-0.5: Moist
		2.0-6.7: Wet	2.5-6.7: Wet	1.0-6.7: Wet	---	---	1.0-6.7: Wet	2.0-6.7: Wet	2.5-6.7: Wet	1.5-6.7: Wet	0.5-6.7: Wet
Ausable-----	A/D	0.0-2.0: Moist	0.0-2.5: Moist	0.0-1.0: Moist	0.0-6.7: Wet	0.0-6.7: Wet	0.0-1.0: Moist	0.0-2.0: Moist	0.0-2.5: Moist	0.0-1.5: Moist	0.0-0.5: Moist
		2.0-6.7: Wet	2.5-6.7: Wet	1.0-6.7: Wet	---	---	1.0-6.7: Wet	2.0-6.7: Wet	2.5-6.7: Wet	1.5-6.7: Wet	0.5-6.7: Wet
22A:											
Cometock-----	C	0.0-2.5: Moist	0.0-2.5: Moist	0.0-2.5: Moist	0.0-0.5: Moist	0.0-1.0: Moist	0.0-2.5: Moist	0.0-2.5: Moist	0.0-4.0: Moist	0.0-5.0: Moist	0.0-2.0: Moist
		2.5-3.0: Wet	2.5-3.5: Wet	2.5-5.0: Wet	0.5-6.7: Wet	1.0-6.7: Wet	2.5-6.7: Wet	2.5-6.7: Wet	4.0-6.7: Wet	5.0-6.7: Wet	2.0-2.5: Wet
		3.0-6.7: Moist	3.5-6.7: Moist	5.0-6.7: Moist	---	---	---	---	---	---	2.5-5.0: Moist
		---	---	---	---	---	---	---	---	---	5.0-6.7: Wet
24A:											
Poskin-----	C	0.0-3.0: Moist	0.0-4.0: Moist	0.0-2.5: Moist	0.0-0.5: Moist	0.0-1.0: Moist	0.0-2.5: Moist	0.0-3.5: Moist	0.0-4.0: Moist	0.0-3.0: Moist	0.0-2.0: Moist
		3.0-6.7: Wet	4.0-6.7: Wet	2.5-6.7: Wet	0.5-6.7: Wet	1.0-6.7: Wet	2.5-6.7: Wet	3.5-6.7: Wet	4.0-6.7: Wet	3.0-6.7: Wet	2.0-6.7: Wet
27A:											
Scott Lake-----	B	0.0-4.5: Moist	0.0-5.5: Moist	0.0-4.0: Moist	0.0-2.5: Moist	0.0-3.0: Moist	0.0-4.5: Moist	0.0-5.0: Moist	0.0-5.5: Moist	0.0-4.5: Moist	0.0-4.0: Moist
		4.5-6.7: Wet	5.5-6.7: Wet	4.0-6.7: Wet	2.5-6.7: Wet	3.0-6.7: Wet	4.5-6.7: Wet	5.0-6.7: Wet	5.5-6.7: Wet	4.5-6.7: Wet	4.0-6.7: Wet



Table 26.--Soil Moisture Status by Depth--Continued

Map symbol and soil name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October
33B: Chetek-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
33C: Chetek-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
38A: Rosholt-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
38B: Rosholt-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
38C: Rosholt-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
38D: Rosholt-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
42D: Amery-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
43B: Antigo-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
43C: Antigo-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
43D: Antigo-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
48A: Brill-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-1.5: Moist	0.0-2.0: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
		---	---	---	1.5-2.5: Wet	2.0-2.5: Wet	---	---	---	---	---
		---	---	---	2.5-6.7: Moist	2.5-6.7: Moist	---	---	---	---	---

Table 26.--Soil Moisture Status by Depth--Continued

Map symbol and soil name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October
63A: Crystal Lake----	B	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-2.0: Moist Wet Moist	0.0-3.0: Moist Wet ---	0.0-3.5: Moist Wet ---	0.0-5.5: Moist 5.5-6.7: Wet ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---
63B: Crystal Lake----	B	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-2.0: Moist Wet Moist	0.0-3.0: Moist Wet ---	0.0-3.5: Moist Wet ---	0.0-5.5: Moist 5.5-6.7: Wet ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---
63C: Crystal Lake----	B	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-2.0: Moist Wet Moist	0.0-3.5: Moist Wet ---	0.0-5.0: Moist Wet ---	0.0-6.7: Moist 5.0-6.7: Wet ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---
63E: Crystal Lake----	B	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-2.5: Moist 2.5-5.0: Wet Moist	0.0-4.5: Moist 4.5-6.7: Wet ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---
64A: Totagatic-----	A/D	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.5: Moist 2.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-1.0: Moist 1.0-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.5: Moist 2.5-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet
Winterfield-----	A/D	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-3.0: Moist 3.0-6.7: Wet	0.0-3.0: Moist 3.0-6.7: Wet

Table 26.--Soil Moisture Status by Depth--Continued

[illegible]

Table 26.--Soil Moisture Status by Depth--Continued

Map symbol and soil name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October
69E: Villas-----	A	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-1.0: Dry 1.0-6.7: Moist	0.0-1.5: Dry 1.5-6.7: Moist	0.0-6.7: Moist ---	0.0-6.7: Moist ---
74B: Villas-----	A	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-1.0: Dry 1.0-6.7: Moist	0.0-1.5: Dry 1.5-6.7: Moist	0.0-6.7: Moist ---	0.0-6.7: Moist ---
74C: Villas-----	A	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-1.0: Dry 1.0-6.7: Moist	0.0-1.5: Dry 1.5-6.7: Moist	0.0-6.7: Moist ---	0.0-6.7: Moist ---
74D: Villas-----	A	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-1.0: Dry 1.0-6.7: Moist	0.0-1.5: Dry 1.5-6.7: Moist	0.0-6.7: Moist ---	0.0-6.7: Moist ---
100B: Menahga-----	A	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-1.0: Dry 1.0-6.7: Moist	0.0-1.5: Dry 1.5-6.7: Moist	0.0-6.7: Moist ---	0.0-6.7: Moist ---
100C: Menahga-----	A	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-1.0: Dry 1.0-6.7: Moist	0.0-1.5: Dry 1.5-6.7: Moist	0.0-6.7: Moist ---	0.0-6.7: Moist ---
100D: Menahga-----	A	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-1.0: Dry 1.0-6.7: Moist	0.0-1.5: Dry 1.5-6.7: Moist	0.0-6.7: Moist ---	0.0-6.7: Moist ---
127D: Amery-----	B	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-1.0: Dry 1.0-6.7: Moist	0.0-1.5: Dry 1.5-6.7: Moist	0.0-6.7: Moist ---	0.0-6.7: Moist ---

Table 26.--Soil Moisture Status by Depth--Continued

Map symbol and soil name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October
127D: Rosholt-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
127E: Amery-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Rosholt-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
156B: Magnor, very stony-----	C	0.0-2.5: Moist	0.0-2.5: Moist	0.0-1.5: Moist	0.0-0.5: Moist	0.0-1.0: Moist	0.0-2.5: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-3.0: Moist	0.0-2.0: Moist
Magnor-----	C	2.5-3.5: Wet	2.5-3.5: Wet	1.5-3.5: Wet	0.5-3.5: Wet	1.0-3.5: Wet	2.5-3.5: Wet	---	---	3.0-3.5: Wet	2.0-3.5: Wet
Magnor-----	C	3.5-6.7: Moist	3.5-6.7: Moist	3.5-6.7: Moist	3.5-6.7: Moist	3.5-6.7: Moist	3.5-6.7: Moist	---	---	3.5-6.7: Moist	3.5-6.7: Moist
157B: Freeon, very stony-----	C	0.0-2.5: Moist	0.0-2.5: Moist	0.0-1.5: Moist	0.0-0.5: Moist	0.0-1.0: Moist	0.0-2.5: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-3.0: Moist	0.0-2.0: Moist
Freeon-----	C	2.5-3.5: Wet	2.5-3.5: Wet	1.5-3.5: Wet	0.5-3.5: Wet	1.0-3.5: Wet	2.5-3.5: Wet	---	---	3.0-3.5: Wet	2.0-3.5: Wet
Freeon-----	C	3.5-6.7: Moist	3.5-6.7: Moist	3.5-6.7: Moist	3.5-6.7: Moist	3.5-6.7: Moist	3.5-6.7: Moist	---	---	3.5-6.7: Moist	3.5-6.7: Moist
Freeon-----	C	0.0-6.7: Moist	0.0-6.7: Moist	0.0-2.5: Moist	0.0-1.0: Moist	0.0-1.5: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-2.5: Moist
Freeon-----	C	---	---	2.5-3.5: Wet	1.0-3.5: Wet	1.5-3.5: Wet	---	---	---	---	2.5-3.5: Wet
Freeon-----	C	---	---	3.5-6.7: Moist	3.5-6.7: Moist	3.5-6.7: Moist	---	---	---	---	3.5-6.7: Moist
Freeon-----	C	0.0-6.7: Moist	0.0-6.7: Moist	0.0-2.5: Moist	0.0-1.0: Moist	0.0-1.5: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-2.5: Moist
Freeon-----	C	---	---	2.5-3.5: Wet	1.0-3.5: Wet	1.5-3.5: Wet	---	---	---	---	2.5-3.5: Wet
Freeon-----	C	---	---	3.5-6.7: Moist	3.5-6.7: Moist	3.5-6.7: Moist	---	---	---	---	3.5-6.7: Moist

Table 26.--Soil Moisture Status by Depth--Continued

[illegible]





Table 26.--Soil Moisture Status by Depth--Continued

Map symbol and soil name	Hydro-logic group	January	February	March	April	May	June	July	August	September	October
368D: Mahtomedi-----	A	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-1.0: Dry 1.0-6.7: Moist	0.0-1.5: Dry 1.5-6.7: Moist	0.0-6.7: Moist ---	0.0-6.7: Moist ---
Cress-----	A	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
371A: Croswell-----	A	0.0-4.0: Moist 4.0-6.7: Wet ---	0.0-5.0: Moist 5.0-6.7: Wet ---	0.0-3.5: Moist 3.5-6.7: Wet ---	0.0-2.0: Moist 2.0-6.7: Wet ---	0.0-2.5: Moist 2.5-6.7: Wet ---	0.0-4.0: Moist 4.0-6.7: Wet ---	0.0-0.5: Dry 0.5-4.5: Moist 4.5-6.7: Wet	0.0-1.0: Dry 1.0-5.0: Moist 5.0-6.7: Wet	0.0-4.0: Moist 4.0-6.7: Wet ---	0.0-3.5: Moist 3.5-6.7: Wet ---
380B: Cress-----	A	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Rosholt-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
380C: Cress-----	A	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Rosholt-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
380D: Cress-----	A	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Rosholt-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
383B: Mahtomedi-----	A	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-1.0: Dry 1.0-6.7: Moist	0.0-1.5: Dry 1.5-6.7: Moist	0.0-6.7: Moist ---	0.0-6.7: Moist ---

Table 26.--Soil Moisture Status by Depth--Continued

Map symbol and soil name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October
383C: Mahtomedi-----	A	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-1.0: Dry 1.0-6.7: Moist	0.0-1.5: Dry 1.5-6.7: Moist	0.0-6.7: Moist ---	0.0-6.7: Moist ---
383D: Mahtomedi-----	A	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-1.0: Dry 1.0-6.7: Moist	0.0-1.5: Dry 1.5-6.7: Moist	0.0-6.7: Moist ---	0.0-6.7: Moist ---
386B: Friendship-----	A	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.0: Moist Wet	0.0-4.5: Moist Wet	0.0-6.0: Moist Wet	0.0-6.7: Moist ---	0.0-1.0: Dry 1.0-6.7: Moist	0.0-1.5: Dry 1.5-6.7: Moist	0.0-6.7: Moist ---	0.0-6.7: Moist ---
Wurtsmith-----	A	0.0-4.0: Moist 4.0-6.7: Wet ---	0.0-5.0: Moist Wet ---	0.0-3.5: Moist Wet ---	0.0-2.0: Moist Wet ---	0.0-2.5: Moist Wet ---	0.0-4.0: Moist Wet ---	0.0-0.5: Dry 0.5-4.5: Moist 4.5-6.7: Wet	0.0-1.0: Dry 1.0-5.0: Moist 5.0-6.7: Wet	0.0-4.0: Moist Wet ---	0.0-3.5: Moist Wet ---
Grayling-----	A	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-1.0: Dry 0.0-6.7: Moist	0.0-1.5: Dry 1.5-6.7: Moist	0.0-6.7: Moist ---	0.0-6.7: Moist ---
397A: Perchlake-----	B	0.0-3.0: Moist 3.0-6.7: Wet	0.0-4.0: Moist Wet	0.0-2.5: Moist Wet	0.0-0.5: Moist Wet	0.0-1.0: Moist Wet	0.0-2.5: Moist Wet	0.0-3.5: Moist Wet	0.0-4.0: Moist Wet	0.0-3.0: Moist Wet	0.0-2.0: Moist Wet
399B: Grayling-----	A	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-1.0: Dry 0.0-6.7: Moist	0.0-1.5: Dry 1.5-6.7: Moist	0.0-6.7: Moist ---	0.0-6.7: Moist ---

Table 26.--Soil Moisture Status by Depth--Continued

[illegible]

Table 26.--Soil Moisture Status by Depth--Continued

Map symbol and soil name	Hydro-logic group	January	February	March	April	May	June	July	August	September	October
412A: Tacoosh-----	A/D	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet
415A: Greenwood-----	A/D	0.0-1.0: Moist 1.0-6.0: Wet	0.0-1.0: Moist 1.0-6.0: Wet	0.0-0.5: Moist 0.5-6.0: Wet	0.0-6.0: Wet ---	0.0-0.5: Wet ---	0.0-6.0: Wet ---	0.0-0.5: Moist 0.5-6.0: Wet	0.0-0.5: Moist 0.5-6.0: Wet	0.0-0.5: Moist 0.5-6.0: Wet	0.0-6.0: Wet ---
439B: Graycalm-----	A	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-1.0: Dry 1.0-6.7: Moist	0.0-1.5: Dry 1.5-6.7: Moist	0.0-6.7: Moist ---	0.0-6.7: Moist ---
Menahga-----	A	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-1.0: Dry 1.0-6.7: Moist	0.0-1.5: Dry 1.5-6.7: Moist	0.0-6.7: Moist ---	0.0-6.7: Moist ---
439C: Graycalm-----	A	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-1.0: Dry 1.0-6.7: Moist	0.0-1.5: Dry 1.5-6.7: Moist	0.0-6.7: Moist ---	0.0-6.7: Moist ---
Menahga-----	A	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-1.0: Dry 1.0-6.7: Moist	0.0-1.5: Dry 1.5-6.7: Moist	0.0-6.7: Moist ---	0.0-6.7: Moist ---
439D: Graycalm-----	A	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-1.0: Dry 1.0-6.7: Moist	0.0-1.5: Dry 1.5-6.7: Moist	0.0-6.7: Moist ---	0.0-6.7: Moist ---
Menahga-----	A	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-1.0: Dry 1.0-6.7: Moist	0.0-1.5: Dry 1.5-6.7: Moist	0.0-6.7: Moist ---	0.0-6.7: Moist ---

Table 26.--Soil Moisture Status by Depth--Continued

Map symbol and soil name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October
441C: Freeon-----	B	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-2.5: Moist Wet Moist	0.0-1.0: Moist Wet Moist	0.0-1.5: Moist 1.5-3.5: Wet 3.5-6.7: Moist	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-2.5: Moist 2.5-3.5: Wet 3.5-6.7: Moist
Cathro-----	A/D	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet
442C: Haugen-----	B	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-2.0: Moist Wet Moist	0.0-2.0: Moist 2.0-6.0: Wet 6.0-6.7: Moist	0.0-3.0: Moist 3.0-6.0: Wet 6.0-6.7: Moist	0.0-4.5: Moist 4.5-6.0: Wet 6.0-6.7: Moist	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---
Greenwood-----	A/D	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-6.7: Wet ---
443D: Amery-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Greenwood-----	A/D	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-6.7: Wet ---
461A: Bowstring-----	A/D	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.5: Moist 2.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-1.0: Moist 1.0-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.5: Moist 2.5-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet
484A: Greenwood-----	A/D	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-6.7: Wet ---

Table 26.--Soil Moisture Status by Depth--Continued

Map symbol and soil name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October
484A: Beseman-----	A/D	0.0-1.0: Moist	0.0-1.0: Moist	0.0-0.5: Moist	0.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-0.5: Moist	0.0-0.5: Moist	0.0-0.5: Moist	0.0-6.7: Wet
		1.0-6.7: Wet	1.0-6.7: Wet	0.5-6.7: Wet	---	---	---	0.5-6.7: Wet	0.5-6.7: Wet	0.5-6.7: Wet	---
495B: Karlsborg-----	D	0.0-6.7: Moist	0.0-6.7: Moist	0.0-3.5: Moist	0.0-1.5: Moist	0.0-3.5: Moist	0.0-3.5: Moist	0.0-1.0: Dry	0.0-1.5: Dry	0.0-6.7: Moist	0.0-6.7: Moist
		---	---	3.5-4.0: Wet	1.5-4.0: Wet	3.5-4.0: Wet	3.5-4.0: Wet	1.0-6.7: Moist	1.5-6.7: Moist	---	---
		---	---	4.0-6.7: Moist	4.0-6.7: Moist	4.0-6.7: Moist	4.0-6.7: Moist	---	---	---	---
Grettum-----	A	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.0: Moist	0.0-4.5: Moist	0.0-6.0: Moist	0.0-6.7: Moist	0.0-1.0: Dry	0.0-1.5: Dry	0.0-6.7: Moist	0.0-6.7: Moist
		---	---	6.0-6.7: Wet	4.5-6.7: Wet	6.0-6.7: Wet	---	1.0-6.7: Moist	1.5-6.7: Moist	---	---
Perida-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-5.5: Moist	0.0-3.5: Moist	0.0-5.5: Moist	0.0-5.5: Moist	0.0-1.0: Dry	0.0-1.5: Dry	0.0-6.7: Moist	0.0-6.7: Moist
		---	---	5.5-6.0: Wet	3.5-6.0: Wet	5.5-6.0: Wet	5.5-6.0: Wet	1.0-6.7: Moist	1.5-6.7: Moist	---	---
		---	---	6.0-6.7: Moist	6.0-6.7: Moist	6.0-6.7: Moist	6.0-6.7: Moist	---	---	---	---
495C: Karlsborg-----	D	0.0-6.7: Moist	0.0-6.7: Moist	0.0-3.5: Moist	0.0-1.5: Moist	0.0-3.5: Moist	0.0-3.5: Moist	0.0-1.0: Dry	0.0-1.5: Dry	0.0-6.7: Moist	0.0-6.7: Moist
		---	---	3.5-4.0: Wet	1.5-4.0: Wet	3.5-4.0: Wet	3.5-4.0: Wet	1.0-6.7: Moist	1.5-6.7: Moist	---	---
		---	---	4.0-6.7: Moist	4.0-6.7: Moist	4.0-6.7: Moist	4.0-6.7: Moist	---	---	---	---
Grettum-----	A	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.0: Moist	0.0-4.5: Moist	0.0-6.0: Moist	0.0-6.7: Moist	0.0-1.0: Dry	0.0-1.5: Dry	0.0-6.7: Moist	0.0-6.7: Moist
		---	---	6.0-6.7: Wet	4.5-6.7: Wet	6.0-6.7: Wet	---	1.0-6.7: Moist	1.5-6.7: Moist	---	---
Perida-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-5.5: Moist	0.0-3.5: Moist	0.0-5.5: Moist	0.0-5.5: Moist	0.0-1.0: Dry	0.0-1.5: Dry	0.0-6.7: Moist	0.0-6.7: Moist
		---	---	5.5-6.0: Wet	3.5-6.0: Wet	5.5-6.0: Wet	5.5-6.0: Wet	1.0-6.7: Moist	1.5-6.7: Moist	---	---
		---	---	6.0-6.7: Moist	6.0-6.7: Moist	6.0-6.7: Moist	6.0-6.7: Moist	---	---	---	---

Table 26.--Soil Moisture Status by Depth--Continued

[illegible]



Table 26.--Soil Moisture Status by Depth--Continued

Map symbol and soil name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October
524E: Frogcreek-----	B	0.0-6.7: Moist ---  ---	0.0-6.7: Moist ---  ---	0.0-2.5: Moist Wet Moist	0.0-1.0: Moist Wet Moist	0.0-1.5: Moist 1.5-3.5: Wet 3.5-6.7: Moist	0.0-6.7: Moist ---  ---	0.0-6.7: Moist ---  ---	0.0-6.7: Moist ---  ---	0.0-6.7: Moist ---  ---	0.0-2.5: Moist 2.5-3.5: Wet 3.5-6.7: Moist
Metonga-----	B	0.0-2.3: Moist	0.0-2.3: Moist	0.0-2.3: Moist	0.0-2.3: Moist	0.0-2.3: Moist	0.0-2.3: Moist	0.0-2.3: Moist	0.0-2.3: Moist	0.0-2.3: Moist	0.0-2.3: Moist
542B: Haugen, very stony-----	B	0.0-6.7: Moist ---  ---	0.0-6.7: Moist ---  ---	0.0-2.0: Moist Wet Moist	0.0-2.0: Moist Wet Moist	0.0-3.0: Moist 3.0-6.0: Wet 6.0-6.7: Moist	0.0-4.5: Moist 4.5-6.0: Wet 6.0-6.7: Moist	0.0-6.7: Moist ---  ---	0.0-6.7: Moist ---  ---	0.0-6.7: Moist ---  ---	0.0-2.5: Moist 2.5-3.5: Wet 3.5-6.7: Moist
Haugen-----	B	0.0-6.7: Moist ---  ---	0.0-6.7: Moist ---  ---	0.0-2.0: Moist Wet Moist	0.0-2.0: Moist Wet Moist	0.0-3.0: Moist 3.0-6.0: Wet 6.0-6.7: Moist	0.0-4.5: Moist 4.5-6.0: Wet 6.0-6.7: Moist	0.0-6.7: Moist ---  ---	0.0-6.7: Moist ---  ---	0.0-6.7: Moist ---  ---	0.0-6.7: Moist ---  ---
542C: Haugen, very stony-----	B	0.0-6.7: Moist ---  ---	0.0-6.7: Moist ---  ---	0.0-2.0: Moist Wet Moist	0.0-2.0: Moist Wet Moist	0.0-3.0: Moist 3.0-6.0: Wet 6.0-6.7: Moist	0.0-4.5: Moist 4.5-6.0: Wet 6.0-6.7: Moist	0.0-6.7: Moist ---  ---	0.0-6.7: Moist ---  ---	0.0-6.7: Moist ---  ---	0.0-6.7: Moist ---  ---
Haugen-----	B	0.0-6.7: Moist ---  ---	0.0-6.7: Moist ---  ---	0.0-2.0: Moist Wet Moist	0.0-2.0: Moist Wet Moist	0.0-3.0: Moist 3.0-6.0: Wet 6.0-6.7: Moist	0.0-4.5: Moist 4.5-6.0: Wet 6.0-6.7: Moist	0.0-6.7: Moist ---  ---	0.0-6.7: Moist ---  ---	0.0-6.7: Moist ---  ---	0.0-6.7: Moist ---  ---

Table 26.--Soil Moisture Status by Depth--Continued

Map symbol and soil name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October
543B: Anigon-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
543C2: Anigon-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
544F: Menahga-----	A	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---
Mahtomedi-----	A	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---
555A: Fordum-----	D	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.5: Moist 2.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-6.7: Wet	0.0-6.7: Wet	0.0-1.0: Moist ---	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.5: Moist 2.5-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet
574B: Sayner-----	A	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-1.0: Dry 1.0-6.7: Moist	0.0-1.5: Dry 1.5-6.7: Moist	0.0-6.7: Moist ---	0.0-6.7: Moist ---
574C: Sayner-----	A	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-1.0: Dry 1.0-6.7: Moist	0.0-1.5: Dry 1.5-6.7: Moist	0.0-6.7: Moist ---	0.0-6.7: Moist ---
574E: Sayner-----	A	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-1.0: Dry 1.0-6.7: Moist	0.0-1.5: Dry 1.5-6.7: Moist	0.0-6.7: Moist ---	0.0-6.7: Moist ---

Table 26.--Soil Moisture Status by Depth--Continued

Map symbol and soil name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October
579B: Parkfalls-----	C	0 0-2.5: Moist 2.5-3.5: Wet 3.5-6.7: Moist	0 0-2.5: Moist 2.5-3.5: Wet 3.5-6.7: Moist	0 0-1.5: Moist 1.5-3.5: Wet 3.5-6.7: Moist	0 0-0.5: Moist 0.5-3.5: Wet 3.5-6.7: Moist	0 0-1.0: Moist 1.0-3.5: Wet 3.5-6.7: Moist	0 0-2.5: Moist 2.5-3.5: Wet 3.5-6.7: Moist	0 0-6.7: Moist --- ---	0 0-6.7: Moist --- ---	0 0-3.0: Moist 3.0-3.5: Wet 3.5-6.7: Moist	0 0-2.0: Moist 2.0-3.5: Wet 3.5-6.7: Moist
600A: Haplosaprists---	D	0 0-6.7: Wet	0 0-6.7: Wet	0 0-6.0: Wet	0 0-6.7: Wet	0 0-6.7: Wet	0 0-6.7: Wet	0 0-6.7: Wet	0 0-6.7: Wet	0 0-6.7: Wet	0 0-6.7: Wet
Psaummaquents----	D	0 0-6.7: Wet	0 0-6.7: Wet	0 0-6.0: Wet	0 0-6.7: Wet	0 0-6.7: Wet	0 0-6.7: Wet	0 0-6.7: Wet	0 0-6.7: Wet	0 0-6.7: Wet	0 0-6.7: Wet
615B: Cress-----	A	0 0-6.7: Moist	0 0-6.7: Moist	0 0-6.7: Moist	0 0-6.7: Moist	0 0-6.7: Moist	0 0-6.7: Moist	0 0-6.7: Moist	0 0-6.7: Moist	0 0-6.7: Moist	0 0-6.7: Moist
615C: Cress-----	A	0 0-6.7: Moist	0 0-6.7: Moist	0 0-6.7: Moist	0 0-6.7: Moist	0 0-6.7: Moist	0 0-6.7: Moist	0 0-6.7: Moist	0 0-6.7: Moist	0 0-6.7: Moist	0 0-6.7: Moist
615D: Cress-----	A	0 0-6.7: Moist	0 0-6.7: Moist	0 0-6.7: Moist	0 0-6.7: Moist	0 0-6.7: Moist	0 0-6.7: Moist	0 0-6.7: Moist	0 0-6.7: Moist	0 0-6.7: Moist	0 0-6.7: Moist
623A: Capitola-----	B/D	0 0-1.5: Moist 1.5-2.5: Wet 2.5-6.7: Moist	0 0-1.5: Moist 1.5-2.5: Wet 2.5-6.7: Moist	0 0-1.0: Moist 1.0-2.5: Wet 2.5-6.7: Moist	0 0-2.5: Wet 2.5-6.7: Moist ---	0 0-2.5: Wet 2.5-6.7: Moist ---	0 0-1.5: Moist 1.5-2.5: Wet 2.5-6.7: Moist	0 0-6.7: Moist ---	0 0-6.7: Moist ---	0 0-1.5: Moist 1.5-2.5: Wet 2.5-6.7: Moist	0 0-1.0: Moist 1.0-2.5: Wet 2.5-6.7: Moist
624A: Ossmer-----	C	0 0-3.0: Moist 3.0-6.7: Wet	0 0-4.0: Moist 4.0-6.7: Wet	0 0-2.5: Moist 2.5-6.7: Wet	0 0-0.5: Moist 0.5-6.7: Wet	0 0-1.0: Moist 1.0-6.7: Wet	0 0-2.5: Moist 2.5-6.7: Wet	0 0-3.5: Moist 3.5-6.7: Wet	0 0-4.0: Moist 4.0-6.7: Wet	0 0-3.0: Moist 3.0-6.7: Wet	0 0-2.0: Moist 2.0-6.7: Wet

Table 26.--Soil Moisture Status by Depth--Continued

[illegible]

Table 26.--Soil Moisture Status by Depth--Continued

Map symbol and soil name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October
670E:											
Keweenaw-----	A	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Pence-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
671B:											
Spoonerhill, stony-----	A	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-2.0: Moist	0.0-2.5: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
		---	---	---	2.0-3.5: Wet	2.5-3.5: Wet	---	---	---	---	---
		---	---	---	3.5-6.7: Moist	3.5-6.7: Moist	---	---	---	---	---
Spoonerhill-----	A	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-2.0: Moist	0.0-2.5: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
		---	---	---	2.0-3.5: Wet	2.5-3.5: Wet	---	---	---	---	---
		---	---	---	3.5-6.7: Moist	3.5-6.7: Moist	---	---	---	---	---
680B:											
Stanberry, stony	C	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-2.0: Moist	0.0-2.5: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
		---	---	---	2.0-3.5: Wet	2.5-3.5: Wet	---	---	---	---	---
		---	---	---	3.5-6.7: Moist	3.5-6.7: Moist	---	---	---	---	---
Pence, stony----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
683A:											
Tipler-----	B	0.0-4.5: Moist	0.0-5.5: Moist	0.0-4.0: Moist	0.0-2.5: Moist	0.0-3.0: Moist	0.0-4.5: Moist	0.0-5.0: Moist	0.0-5.5: Moist	0.0-4.5: Moist	0.0-4.0: Moist
		4.5-6.7: Wet	5.5-6.7: Wet	4.0-6.7: Wet	2.5-6.7: Wet	3.0-6.7: Wet	4.5-6.7: Wet	5.0-6.7: Wet	5.5-6.7: Wet	4.5-6.7: Wet	4.0-6.7: Wet
706A:											
Winterfield-----	A/D	0.0-2.0: Moist	0.0-2.0: Moist	0.0-1.5: Moist	0.0-0.5: Moist	0.0-1.5: Moist	0.0-2.0: Moist	0.0-2.0: Moist	0.0-2.0: Moist	0.0-3.0: Moist	0.0-3.0: Moist
		2.0-6.7: Wet	2.0-6.7: Wet	1.5-6.7: Wet	0.5-6.7: Wet	1.5-6.7: Wet	2.0-6.7: Wet	2.0-6.7: Wet	2.0-6.7: Wet	3.0-6.7: Wet	3.0-6.7: Wet

Table 26.--Soil Moisture Status by Depth--Continued

Map symbol and soil name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October
706A: Totagatic-----	D	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.5: Moist 2.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	---	0.0-6.7: Wet ---	0.0-1.0: Moist 1.0-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.5: Moist 2.5-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet
724A: Rib-----	B/D	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.5: Moist 2.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-6.7: Wet ---	0.0-6.7: Wet ---	0.0-1.0: Moist 1.0-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-2.5: Moist 2.5-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet
Rock outcrop.											
726B: Sissabagama-----	A	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-2.5: Moist 2.5-5.0: Wet 5.0-6.7: Moist	0.0-3.0: Moist 3.0-6.7: Wet ---	0.0-3.5: Moist 3.5-6.7: Wet ---	0.0-1.0: Dry 1.0-5.5: 5.5-6.7: Wet	0.0-1.5: Dry 1.5-6.7: Moist ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---
733A: Wozny-----	B/D	0.0-1.5: Moist 1.5-3.5: Wet 3.5-6.7: Moist	0.0-1.5: Moist 1.5-3.5: Wet 3.5-6.7: Moist	0.0-1.0: Moist 1.0-3.5: Wet 3.5-6.7: Moist	0.0-3.5: Wet 3.5-6.7: --- ---	0.0-3.5: Wet Moist ---	0.0-1.5: Moist 1.5-3.5: Wet Moist	0.0-3.0: Moist 3.0-3.5: Wet 3.5-6.0: Moist	0.0-6.7: Moist --- ---	0.0-1.5: Moist 1.5-3.5: Wet Moist	0.0-1.0: Moist 1.0-3.5: Wet Moist
771A: Lenroot-----	A	0.0-4.0: Moist 4.0-6.7: Wet ---	0.0-5.0: Moist 5.0-6.7: Wet ---	0.0-3.5: Moist 3.5-6.7: Wet ---	0.0-2.0: Moist 2.0-6.7: Wet ---	0.0-2.5: Moist 2.5-6.7: Wet ---	0.0-4.0: Moist 4.0-6.7: Wet ---	0.0-0.5: Dry 0.5-4.5: Moist 4.5-6.7: Wet	0.0-1.0: Dry 1.0-5.0: Moist 5.0-6.7: Wet	0.0-4.0: Moist 4.0-6.7: Wet ---	0.0-3.5: Moist 3.5-6.7: Wet ---
827A: Scoba-----	B	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-4.0: Moist 4.0-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-4.0: Moist 4.0-6.7: Wet	0.0-5.5: Moist 5.5-6.7: Wet	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---

Table 26.--Soil Moisture Status by Depth--Continued

Map symbol and soil name	Hydro-logic group	January	February	March	April	May	June	July	August	September	October
853C: Frogcreek-----	B	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-2.5: Moist Wet Moist	0.0-1.0: Moist Wet Moist	0.0-1.5: Moist 1.5-3.5: Wet 3.5-6.7: Moist	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-2.5: Moist 2.5-3.5: Wet 3.5-6.7: Moist
Stinnett-----	C	0.0-2.5: Moist 2.5-4.5: Wet 4.5-6.7: Moist	0.0-2.5: Moist 2.5-4.5: Wet Moist	0.0-1.5: Moist 1.5-4.5: Wet Moist	0.0-0.5: Moist 0.5-4.5: Wet Moist	0.0-1.0: Moist 1.0-4.5: Wet Moist	0.0-3.0: Moist 3.0-4.5: Wet Moist	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-3.5: Moist 3.5-4.5: Wet 4.5-6.7: Moist	0.0-2.0: Moist 2.0-4.5: Wet Moist
Wozny-----	B/D	0.0-1.5: Moist 1.5-3.5: Wet 3.5-6.7: Moist	0.0-1.5: Moist 1.5-3.5: Wet Moist	0.0-1.0: Moist 1.0-3.5: Wet Moist	0.0-3.5: Wet 3.5-6.7: --- Moist	0.0-3.5: Wet 3.5-6.7: --- Moist	0.0-1.5: Moist 1.5-3.5: Wet Moist	0.0-3.0: Moist 3.0-3.5: Wet 3.5-6.0: Moist	0.0-6.7: Moist --- ---	0.0-1.5: Moist 1.5-3.5: Wet Moist	0.0-1.0: Moist 1.0-3.5: Wet Moist
856B: Stinnett-----	C	0.0-2.5: Moist 2.5-4.5: Wet 4.5-6.7: Moist	0.0-2.5: Moist 2.5-4.5: Wet Moist	0.0-1.5: Moist 1.5-4.5: Wet Moist	0.0-0.5: Moist 0.5-4.5: Wet Moist	0.0-1.0: Moist 1.0-4.5: Wet Moist	0.0-3.0: Moist 3.0-4.5: Wet Moist	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-3.5: Moist 3.5-4.5: Wet Moist	0.0-2.0: Moist 2.0-4.5: Wet Moist
857B: Frogcreek-----	B	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-2.5: Moist 2.5-3.5: Wet Moist	0.0-1.0: Moist 1.0-3.5: Wet Moist	0.0-1.5: Moist 1.5-3.5: Wet Moist	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-2.5: Moist 2.5-3.5: Wet Moist
857C: Frogcreek-----	B	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-2.5: Moist 2.5-3.5: Wet Moist	0.0-1.0: Moist 1.0-3.5: Wet Moist	0.0-1.5: Moist 1.5-3.5: Wet Moist	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-2.5: Moist 2.5-3.5: Wet Moist

Table 26.--Soil Moisture Status by Depth--Continued

Map symbol and soil name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October
873B: Stanberry-----	B	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-2.0: Moist Wet Moist	0.0-2.5: Moist 2.5-3.5: Wet 3.5-6.7: Moist	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---
873C: Stanberry-----	B	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-2.0: Moist Wet Moist	0.0-2.5: Moist 2.5-3.5: Wet 3.5-6.7: Moist	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---
873D: Stanberry-----	B	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-2.0: Moist Wet Moist	0.0-2.5: Moist 2.5-3.5: Wet 3.5-6.7: Moist	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---
905A: Cublake-----	B	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-2.5: Moist 2.5-5.0: Wet 5.0-6.7: Moist	0.0-3.0: Moist 3.0-6.7: Wet ---	0.0-3.5: Moist 3.5-6.7: Wet ---	0.0-1.0: Dry 1.0-5.5: Moist 5.5-6.7: Wet	0.0-1.5: Dry 1.5-6.7: Moist ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---
926A: Flink-----	B	0.0-3.5: Moist 3.5-4.5: Wet 4.5-6.7: Moist	0.0-3.5: Moist 3.5-4.5: Wet 4.5-6.7: Moist	0.0-2.5: Moist 2.5-4.5: Wet 4.5-6.7: Moist	0.0-1.0: Moist 1.0-4.5: Wet 4.5-6.7: Moist	0.0-1.5: Moist 1.5-4.5: Wet 4.5-6.7: Moist	0.0-2.5: Moist 2.5-4.5: Wet 4.5-6.7: Moist	0.0-3.5: Moist 3.5-4.5: Wet 4.5-6.7: Moist	0.0-4.0: Moist 4.0-4.5: Wet 4.5-6.7: Moist	0.0-3.5: Moist 3.5-4.5: Wet 4.5-6.7: Moist	0.0-2.5: Moist 2.5-4.5: Wet 4.5-6.7: Moist



Table 26.--Soil Moisture Status by Depth--Continued

Map symbol and soil name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October
943D: Stanberry-----	B	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-2.0: Moist Wet Moist	0.0-2.5: Moist 2.5-3.5: Wet 3.5-6.7: Moist	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---	0.0-6.7: Moist --- ---
Greenwood-----	A/D	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-6.7: Wet --- ---	0.0-6.7: Wet --- ---	0.0-6.7: Wet --- ---	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-6.7: Wet --- ---
948A: Billyboy-----	B	0.0-4.5: Moist 4.5-6.7: Wet	0.0-5.5: Moist 5.5-6.7: Wet	0.0-3.0: Moist 3.0-6.7: Wet	0.0-1.5: Moist 1.5-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet	0.0-3.5: Moist 3.5-6.7: Wet	0.0-5.0: Moist 5.0-6.7: Wet	0.0-5.5: Moist 5.5-6.7: Wet	0.0-4.5: Moist 4.5-6.7: Wet	0.0-4.0: Moist 4.0-6.7: Wet
970C: Keweenaw-----	A	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Pence-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Greenwood-----	A/D	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-6.7: Wet --- ---	0.0-6.7: Wet --- ---	0.0-6.7: Wet --- ---	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-6.7: Wet --- ---
970E: Keweenaw-----	A	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Pence-----	B	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
Greenwood-----	A/D	0.0-1.0: Moist 1.0-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-6.7: Wet --- ---	0.0-6.7: Wet --- ---	0.0-6.7: Wet --- ---	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-6.7: Wet --- ---

Table 26.--Soil Moisture Status by Depth--Continued

Map symbol and soil name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October
1070C: Fremstadt-----	A	0.0-6.0: Moist ---	0.0-6.0: Moist ---	0.0-6.0: Moist ---	0.0-6.0: Moist ---	0.0-6.0: Moist ---	0.0-6.0: Moist ---	0.0-6.0: Moist ---	0.0-1.5: Dry 1.5-6.0: Moist	0.0-6.0: Moist ---	0.0-6.0: Moist ---
Cress-----	A	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
1070D: Fremstadt-----	A	0.0-6.0: Moist ---	0.0-6.0: Moist ---	0.0-6.0: Moist ---	0.0-6.0: Moist ---	0.0-6.0: Moist ---	0.0-6.0: Moist ---	0.0-6.0: Moist ---	0.0-1.5: Dry 1.5-6.0: Moist	0.0-6.0: Moist ---	0.0-6.0: Moist ---
Cress-----	A	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
1080B: Spoonerhill-----	A	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-2.0: Moist Wet 3.5-6.7: Moist	0.0-2.5: Moist 2.5-3.5: Wet 3.5-6.7: Moist	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---
Spoonerhill, stony-----	A	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-2.0: Moist Wet 3.5-6.7: Moist	0.0-2.5: Moist 2.5-3.5: Wet 3.5-6.7: Moist	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---
Cress-----	A	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist
1653C: Stanberry-----	B	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-2.0: Moist 2.0-3.5: Wet 3.5-6.7: Moist	0.0-2.5: Moist 2.5-3.5: Wet 3.5-6.7: Moist	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---	0.0-6.7: Moist ---

Table 26.--Soil Moisture Status by Depth--Continued

Map symbol and soil name	Hydro- logic group	January	February	March	April	May	June	July	August	September	October
1653C: Parkfalls-----	C	0.0-2.5: Moist 2.5-3.5: Wet 3.5-6.7: Moist	0.0-2.5: Moist 2.5-3.5: Wet 3.5-6.7: Moist	0.0-1.5: Moist 1.5-3.5: Wet 3.5-6.7: Moist	0.0-0.5: Moist 0.5-3.5: Wet 3.5-6.7: Moist	0.0-1.0: Moist 1.0-3.5: Wet 3.5-6.7: Moist	0.0-2.5: Moist 2.5-3.5: Wet 3.5-6.7: Moist	0.0-6.7: Moist --- --- ---	0.0-6.7: Moist --- ---	0.0-3.0: Moist 3.0-3.5: Wet 3.5-6.7: Moist	0.0-2.0: Moist 2.0-3.5: Wet 3.5-6.7: Moist
Wozny-----	B/D	0.0-1.5: Moist 1.5-3.5: Wet 3.5-6.7: Moist	0.0-1.5: Moist 1.5-3.5: Wet 3.5-6.7: Moist	0.0-1.0: Moist 1.0-3.5: Wet 3.5-6.7: Moist	0.0-3.5: Wet 3.5-6.7: Moist ---	0.0-3.5: Wet Moist ---	0.0-1.5: Moist 1.5-3.5: Wet 3.5-6.7: Moist	0.0-3.0: Moist 3.0-3.5: Wet 3.5-6.0: Moist	0.0-6.7: Moist ---	0.0-1.5: Moist 1.5-3.5: Wet 3.5-6.7: Moist	0.0-1.0: Moist 1.0-3.5: Wet 3.5-6.7: Moist
2015. Pits											
2050. Landfill											
3011A: Barronett-----	B/D	0.0-1.5: Moist 1.5-2.5: Wet 2.5-5.0: Moist 5.0-6.7: Wet	0.0-5.5: Moist 5.5-6.7: Wet --- --- ---	0.0-1.0: Moist 1.0-2.5: Wet 2.5-6.7: Moist ---	0.0-6.7: Wet --- --- ---	0.0-6.7: Wet --- ---	0.0-6.7: Wet --- ---	0.0-2.0: Moist 2.0-6.7: Wet ---	0.0-2.0: Moist 2.0-6.7: Wet ---	0.0-4.0: Moist 4.0-6.7: Wet ---	0.0-1.5: Wet 1.5-4.0: Moist 4.0-6.7: Wet ---
3125A: Meehan-----	A	0.0-3.0: Moist 3.0-6.7: Wet	0.0-4.0: Moist 4.0-6.7: Wet	0.0-2.5: Moist 2.5-6.7: Wet	0.0-0.5: Moist 0.5-6.7: Wet	0.0-1.0: Moist 1.0-6.7: Wet	0.0-2.5: Moist 2.5-6.7: Wet	0.0-3.5: Moist 3.5-6.7: Wet	0.0-4.0: Moist 4.0-6.7: Wet	0.0-3.0: Moist 3.0-6.7: Wet	0.0-2.0: Moist 2.0-6.7: Wet
3126A: Wurtemith-----	A	0.0-4.0: Moist 4.0-6.7: Wet ---	0.0-5.0: Moist 5.0-6.7: Wet ---	0.0-3.5: Moist 3.5-6.7: Wet ---	0.0-2.0: Moist 2.0-6.7: Wet ---	0.0-2.5: Moist 2.5-6.7: Wet ---	0.0-4.0: Moist 4.0-6.7: Wet ---	0.0-0.5: Dry 0.5-4.5: Moist 4.5-6.7: Wet	0.0-1.0: Dry 1.0-5.0: Moist 5.0-6.7: Wet	0.0-4.0: Moist 4.0-6.7: Wet ---	0.0-3.5: Moist 3.5-6.7: Wet ---

Table 26.--Soil Moisture Status by Depth--Continued

Map symbol and soil name	Hydro-logic group	January	February	March	April	May	June	July	August	September	October
3276A:											
Au Gres-----	B	0.0-3.0: Moist	0.0-4.0: Moist	0.0-2.5: Moist	0.0-0.5: Moist	0.0-1.0: Moist	0.0-2.5: Moist	0.0-3.5: Moist	0.0-4.0: Moist	0.0-3.0: Moist	0.0-2.0: Moist
		3.0-6.7: Wet	4.0-6.7: Wet	2.5-6.7: Wet	0.5-6.7: Wet	1.0-6.7: Wet	2.5-6.7: Wet	3.5-6.7: Wet	4.0-6.7: Wet	3.0-6.7: Wet	2.0-6.7: Wet
3312B:											
Glendenning, very stony----	C	0.0-2.5: Moist	0.0-2.5: Moist	0.0-1.5: Moist	0.0-0.5: Moist	0.0-1.0: Moist	0.0-3.0: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-3.5: Moist	0.0-2.0: Moist
		2.5-5.5: Wet	2.5-5.5: Wet	1.5-5.5: Wet	0.5-5.5: Wet	1.0-5.5: Wet	3.0-5.5: Wet	---	---	3.5-5.5: Wet	2.0-5.5: Wet
		5.5-6.7: Moist	5.5-6.7: Moist	5.5-6.7: Moist	5.5-6.7: Moist	5.5-6.7: Moist	5.5-6.7: Moist	---	---	5.5-6.7: Moist	5.5-6.7: Moist
Glendenning-----	C	0.0-2.5: Moist	0.0-2.5: Moist	0.0-1.5: Moist	0.0-0.5: Moist	0.0-1.0: Moist	0.0-3.0: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-3.5: Moist	0.0-2.0: Moist
		2.5-5.5: Wet	2.5-5.5: Wet	1.5-5.5: Wet	0.5-5.5: Wet	1.0-5.5: Wet	3.0-5.5: Wet	---	---	3.5-5.5: Wet	2.0-5.5: Wet
		5.5-6.7: Moist	5.5-6.7: Moist	5.5-6.7: Moist	5.5-6.7: Moist	5.5-6.7: Moist	5.5-6.7: Moist	---	---	5.5-6.7: Moist	5.5-6.7: Moist
3336A:											
Fenander-----	B/D	0.0-1.5: Moist	0.0-5.5: Moist	0.0-2.5: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-2.0: Moist	0.0-2.0: Moist	0.0-4.0: Moist	0.0-1.5: Moist
		1.5-2.5: Wet	5.5-6.7: Wet	2.5-6.7: Moist	---	---	---	2.0-6.7: Wet	2.0-6.7: Wet	4.0-6.7: Wet	1.5-4.0: Moist
		2.5-5.0: Moist	---	---	---	---	---	---	---	---	4.0-6.7: Wet
		5.0-6.7: Wet	---	---	---	---	---	---	---	---	---
3403A:											
Loxley-----	A/D	0.0-1.0: Moist	0.0-1.0: Moist	0.0-0.5: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-0.5: Moist	0.0-0.5: Moist	0.0-0.5: Moist	0.0-6.7: Moist
		1.0-6.7: Wet	1.0-6.7: Wet	0.5-6.7: Wet	---	---	---	0.5-6.7: Wet	0.5-6.7: Wet	0.5-6.7: Wet	---
Beseman-----	A/D	0.0-1.0: Moist	0.0-1.0: Moist	0.0-0.5: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-6.7: Moist	0.0-0.5: Moist	0.0-0.5: Moist	0.0-0.5: Moist	0.0-6.7: Moist
		1.0-6.7: Wet	1.0-6.7: Wet	0.5-6.7: Wet	---	---	---	0.5-6.7: Wet	0.5-6.7: Wet	0.5-6.7: Wet	---







Table 27.--Flooding Frequency and Duration--Continued

Map symbol and soil name	January	February	March	April	May	June	July	August	September	October
33C: Chetek-----	None	None	None	None	None	None	None	None	None	None
38A: Rosholt-----	None	None	None	None	None	None	None	None	None	None
38B: Rosholt-----	None	None	None	None	None	None	None	None	None	None
38C: Rosholt-----	None	None	None	None	None	None	None	None	None	None
38D: Rosholt-----	None	None	None	None	None	None	None	None	None	None
42D: Amery-----	None	None	None	None	None	None	None	None	None	None
43B: Antigo-----	None	None	None	None	None	None	None	None	None	None
43C: Antigo-----	None	None	None	None	None	None	None	None	None	None
43D: Antigo-----	None	None	None	None	None	None	None	None	None	None
48A: Brill-----	None	None	None	None	None	None	None	None	None	None
63A: Crystal Lake---	None	None	None	None	None	None	None	None	None	None
63B: Crystal Lake---	None	None	None	None	None	None	None	None	None	None
63C: Crystal Lake---	None	None	None	None	None	None	None	None	None	None
63E: Crystal Lake---	None	None	None	None	None	None	None	None	None	None
64A: Totagatic-----	Rare Brief	Rare Brief	Occasional Brief	Frequent Long	Frequent Long	Occasional Brief	Rare Brief	Occasional Brief	Occasional Brief	Occasional Brief

















Table 27.--Flooding Frequency and Duration--Continued

[illegible]























Table 28.---Ponding Frequency, Duration, and Depth--Continued

Map symbol and soil name	January	February	March	April	May	June	July	August	September	October
380C: Cress-----	None	None	None	None	None	None	None	None	None	None
Rosholt-----	None	None	None	None	None	None	None	None	None	None
380D: Cress-----	None	None	None	None	None	None	None	None	None	None
Rosholt-----	None	None	None	None	None	None	None	None	None	None
383B: Mahtomedi-----	None	None	None	None	None	None	None	None	None	None
383C: Mahtomedi-----	None	None	None	None	None	None	None	None	None	None
383D: Mahtomedi-----	None	None	None	None	None	None	None	None	None	None
396B: Friendship-----	None	None	None	None	None	None	None	None	None	None
Wurtsmith-----	None	None	None	None	None	None	None	None	None	None
Grayling-----	None	None	None	None	None	None	None	None	None	None
397A: Perchlake-----	None	None	None	None	None	None	None	None	None	None
399B: Grayling-----	None	None	None	None	None	None	None	None	None	None
399C: Grayling-----	None	None	None	None	None	None	None	None	None	None
399D: Grayling-----	None	None	None	None	None	None	None	None	None	None
405A: Lupton-----	None	None	Occasional Brief Depth: 0.5	Frequent Long Depth: 0.5	Frequent Long Depth: 0.5	Occasional Brief Depth: 0.5	None	None	None	None







Table 28.---Ponding Frequency, Duration, and Depth--Continued

Map symbol and soil name	January	February	March	April	May	June	July	August	September	October
515A: Manitowish-----	None	None	None	None	None	None	None	None	None	None
521A: Dody-----	None	None	None	Frequent Long Depth: 0.5	Occasional Brief Depth: 0.5	None	None	None	None	Occasional Brief Depth: 0.5
524E: Rock outcrop.										
Frogcreek-----	None	None	None	None	None	None	None	None	None	None
Metonga-----	None	None	None	None	None	None	None	None	None	None
542B: Haugen, very stony-----	None	None	None	None	None	None	None	None	None	None
Haugen-----	None	None	None	None	None	None	None	None	None	None
542C: Haugen, very stony-----	None	None	None	None	None	None	None	None	None	None
Haugen-----	None	None	None	None	None	None	None	None	None	None
543B: Anigon-----	None	None	None	None	None	None	None	None	None	None
543C2: Anigon-----	None	None	None	None	None	None	None	None	None	None
544F: Menahga-----	None	None	None	None	None	None	None	None	None	None
Mahtomedi-----	None	None	None	None	None	None	None	None	None	None
555A: Fordum-----	None	None	None	Frequent Long Depth: 0.5	Frequent Long Depth: 0.5	None	None	None	None	None



Table 28.---Ponding Frequency, Duration, and Depth--Continued

Map symbol and soil name	January	February	March	April	May	June	July	August	September	October
632B: Aftad-----	None	None	None	None	None	None	None	None	None	None
632C: Aftad-----	None	None	None	None	None	None	None	None	None	None
633F: Pence-----	None	None	None	None	None	None	None	None	None	None
Padus-----	None	None	None	None	None	None	None	None	None	None
648B: Sconsin-----	None	None	None	None	None	None	None	None	None	None
670C: Keweenaw-----	None	None	None	None	None	None	None	None	None	None
Pence-----	None	None	None	None	None	None	None	None	None	None
670E: Keweenaw-----	None	None	None	None	None	None	None	None	None	None
Pence-----	None	None	None	None	None	None	None	None	None	None
671B: Spoonershill, stony-----	None	None	None	None	None	None	None	None	None	None
Spoonershill-----	None	None	None	None	None	None	None	None	None	None
680B: Stanberry, stony	None	None	None	None	None	None	None	None	None	None
Pence, stony---	None	None	None	None	None	None	None	None	None	None
683A: Tipler-----	None	None	None	None	None	None	None	None	None	None
706A: Winterfield----	None	None	None	None	None	None	None	None	None	None
Totagatic-----	None	None	None	Frequent Long Depth: 0.5	Frequent Long Depth: 0.5	None	None	None	None	None













Table 29.--Soil Features

(See text for definitions of terms used in this table. Absence of an entry indicates that the feature is not a concern or that data were not estimated)

Map symbol and soil name	Restrictive layer		Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Initial	Total		Uncoated steel	Concrete
		In	In	In			
3A:							
Totagatic-----	---	>80	4-12	25-30	Moderate	High	Moderate
Bowstring-----	---	>80	6-18	50-55	High	Moderate	Low
Ausable-----	---	>80	4-12	25-30	Moderate	Moderate	Low
22A:							
Comstock-----	---	>80	---	---	High	High	Moderate
24A:							
Poskin-----	---	>80	---	---	High	High	Moderate
27A:							
Scott Lake-----	---	>80	---	---	Moderate	Moderate	Moderate
28B:							
Haugen, very stony----	Dense material	60-80	---	---	Moderate	Moderate	Moderate
Haugen-----	Dense material	60-80	---	---	Moderate	Moderate	Moderate
Rosholt, very stony----	---	>80	---	---	Moderate	Low	Moderate
Rosholt-----	---	>80	---	---	Moderate	Low	Moderate
28C:							
Haugen, very stony----	Dense material	60-80	---	---	Moderate	Moderate	Moderate
Haugen-----	Dense material	60-80	---	---	Moderate	Moderate	Moderate
Rosholt, very stony----	---	>80	---	---	Moderate	Low	Moderate
Rosholt-----	---	>80	---	---	Moderate	Low	Moderate
33B:							
Chetek-----	---	>80	---	---	Low	Low	Moderate
33C:							
Chetek-----	---	>80	---	---	Low	Low	Moderate
38A:							
Rosholt-----	---	>80	---	---	Moderate	Low	Moderate
38B:							
Rosholt-----	---	>80	---	---	Moderate	Low	Moderate
38C:							
Rosholt-----	---	>80	---	---	Moderate	Low	Moderate
38D:							
Rosholt-----	---	>80	---	---	Moderate	Low	Moderate
42D:							
Amery-----	Dense material	60-80	---	---	Moderate	Low	Moderate
43B:							
Antigo-----	---	>80	---	---	Moderate	Low	Moderate

Table 29.--Soil Features--Continued

Map symbol and soil name	Restrictive layer		Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Initial	Total		Uncoated steel	Concrete
		In	In	In			
43C: Antigo-----	---	>80	---	---	Moderate	Low	Moderate
43D: Antigo-----	---	>80	---	---	Moderate	Low	Moderate
48A: Brill-----	---	>80	---	---	High	Moderate	Moderate
63A: Crystal Lake-----	---	>80	---	---	High	Moderate	Moderate
63B: Crystal Lake-----	---	>80	---	---	High	Moderate	Moderate
63C: Crystal Lake-----	---	>80	---	---	High	Moderate	Moderate
63E: Crystal Lake-----	---	>80	---	---	High	Moderate	Moderate
64A: Totagatic-----	---	>80	4-12	25-30	Moderate	High	Moderate
Winterfield-----	---	>80	---	---	Low	Low	Low
69B: Keweenaw-----	---	>80	---	---	Low	Low	Moderate
Sayner-----	---	>80	---	---	Low	Low	High
Vilas-----	---	>80	---	---	Low	Low	Moderate
69C: Keweenaw-----	---	>80	---	---	Low	Low	Moderate
Sayner-----	---	>80	---	---	Low	Low	High
Vilas-----	---	>80	---	---	Low	Low	Moderate
69E: Keweenaw-----	---	>80	---	---	Low	Low	Moderate
Sayner-----	---	>80	---	---	Low	Low	High
Vilas-----	---	>80	---	---	Low	Low	Moderate
74B: Vilas-----	---	>80	---	---	Low	Low	Moderate
74C: Vilas-----	---	>80	---	---	Low	Low	Moderate
74D: Vilas-----	---	>80	---	---	Low	Low	Moderate
100B: Menahga-----	---	>80	---	---	Low	Low	High
100C: Menahga-----	---	>80	---	---	Low	Low	High

Table 29.--Soil Features--Continued

Map symbol and soil name	Restrictive layer		Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Initial	Total		Uncoated steel	Concrete
		In	In	In			
100D: Menahga-----	---	>80	---	---	Low	Low	High
127D: Amery-----	Dense material	60-80	---	---	Moderate	Low	Moderate
Rosholt-----	---	>80	---	---	Moderate	Low	Moderate
127E: Amery-----	Dense material	60-80	---	---	Moderate	Low	Moderate
Rosholt-----	---	>80	---	---	Moderate	Low	Moderate
156B: Magnor, very stony----	Dense material	40-60	---	---	Moderate	Moderate	Moderate
Magnor-----	Dense material	40-60	---	---	Moderate	Moderate	Moderate
157B: Freeon, very stony----	Dense material	40-60	---	---	Moderate	Moderate	Moderate
Freeon-----	Dense material	40-60	---	---	Moderate	Moderate	Moderate
157C: Freeon, very stony----	Dense material	40-60	---	---	Moderate	Moderate	Moderate
Freeon-----	Dense material	40-60	---	---	Moderate	Moderate	Moderate
160A: Oesterle-----	---	>80	---	---	Moderate	Moderate	Moderate
182B: Padus-----	---	>80	---	---	Moderate	Low	Moderate
182C: Padus-----	---	>80	---	---	Moderate	Low	Moderate
192A: Worcester-----	---	>80	---	---	Moderate	Moderate	Moderate
193A: Minocqua-----	---	>80	---	---	High	High	Moderate
215B: Pence-----	---	>80	---	---	Low	Low	Moderate
215C: Pence-----	---	>80	---	---	Low	Low	Moderate
215D: Pence-----	---	>80	---	---	Low	Low	Moderate
315A: Rib-----	---	>80	---	---	High	High	Moderate
337A: Plover-----	---	>80	---	---	Moderate	Moderate	Moderate
368B: Mahtomedi-----	---	>80	---	---	Low	Low	Moderate
Cress-----	---	>80	---	---	Low	Low	Moderate



Table 29.--Soil Features--Continued

Map symbol and soil name	Restrictive layer		Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Initial	Total		Uncoated steel	Concrete
		In	In	In			
368C:							
Mahtomedi-----	---	>80	---	---	Low	Low	Moderate
Cress-----	---	>80	---	---	Low	Low	Moderate
368D:							
Mahtomedi-----	---	>80	---	---	Low	Low	Moderate
Cress-----	---	>80	---	---	Low	Low	Moderate
371A:							
Croswell-----	---	>80	---	---	Low	Low	Moderate
380B:							
Cress-----	---	>80	---	---	Low	Low	Moderate
Rosholt-----	---	>80	---	---	Moderate	Low	Moderate
380C:							
Cress-----	---	>80	---	---	Low	Low	Moderate
Rosholt-----	---	>80	---	---	Moderate	Low	Moderate
380D:							
Cress-----	---	>80	---	---	Low	Low	Moderate
Rosholt-----	---	>80	---	---	Moderate	Low	Moderate
383B:							
Mahtomedi-----	---	>80	---	---	Low	Low	Moderate
383C:							
Mahtomedi-----	---	>80	---	---	Low	Low	Moderate
383D:							
Mahtomedi-----	---	>80	---	---	Low	Low	Moderate
396B:							
Friendship-----	---	>80	---	---	Low	Low	Moderate
Wurtsmith-----	---	>80	---	---	Low	Low	High
Grayling-----	---	>80	---	---	Low	Low	Moderate
397A:							
Perchlake-----	---	>80	---	---	Low	Low	Moderate
399B:							
Grayling-----	---	>80	---	---	Low	Low	Moderate
399C:							
Grayling-----	---	>80	---	---	Low	Low	Moderate
399D:							
Grayling-----	---	>80	---	---	Low	Low	Moderate
405A:							
Lupton-----	---	>80	6-18	50-55	High	Moderate	Low
Cathro-----	---	>80	4-12	19-22	High	Moderate	Moderate
Tawas-----	---	>80	4-15	25-30	High	Moderate	Low

Table 29.--Soil Features--Continued

Map symbol and soil name	Restrictive layer		Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Initial	Total		Uncoated steel	Concrete
		In	In	In			
406A: Loxley-----	---	>80	6-18	50-55	High	Moderate	High
407A: Seelyeville-----	---	>80	0-8	20-22	High	Moderate	Moderate
Markey-----	---	>80	0-4	10-12	High	Moderate	Low
410A: Seelyeville-----	---	>80	0-8	20-22	High	Moderate	Moderate
Cathro-----	---	>80	4-12	19-22	High	Moderate	Moderate
412A: Rifle-----	---	>80	---	---	High	Moderate	Low
Tacoosh-----	---	>80	4-12	19-22	High	Moderate	Low
415A: Greenwood-----	---	>80	6-18	50-55	High	Moderate	High
439B: Graycalm-----	---	>80	---	---	Low	Low	High
Menahga-----	---	>80	---	---	Low	Low	High
439C: Graycalm-----	---	>80	---	---	Low	Low	High
Menahga-----	---	>80	---	---	Low	Low	High
439D: Graycalm-----	---	>80	---	---	Low	Low	High
Menahga-----	---	>80	---	---	Low	Low	High
441C: Freeon-----	Dense material	40-60	---	---	Moderate	Moderate	Moderate
Cathro-----	---	>80	4-12	19-22	High	Moderate	Moderate
442C: Haugen-----	Dense material	60-80	---	---	Moderate	Moderate	Moderate
Greenwood-----	---	>80	---	---	High	Moderate	High
443D: Amery-----	Dense material	60-80	---	---	Moderate	Low	Moderate
Greenwood-----	---	>80	---	---	High	Moderate	High
461A: Bowstring-----	---	>80	6-18	50-55	High	Moderate	Low
484A: Greenwood-----	---	>80	---	---	High	Moderate	High
Beseman-----	---	>80	4-18	12-36	High	High	High
495B: Karlsborg-----	---	>80	---	---	Moderate	High	Moderate

Table 29.--Soil Features--Continued

Map symbol and soil name	Restrictive layer		Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Initial	Total		Uncoated steel	Concrete
		In	In	In			
495B:							
Grettum-----	---	>80	---	---	Low	Low	Moderate
Perida-----	---	>80	---	---	Moderate	High	Moderate
495C:							
Karlsborg-----	---	>80	---	---	Moderate	High	Moderate
Grettum-----	---	>80	---	---	Low	Low	Moderate
Perida-----	---	>80	---	---	Moderate	High	Moderate
495D:							
Karlsborg-----	---	>80	---	---	Moderate	High	Moderate
Grettum-----	---	>80	---	---	Low	Low	Moderate
Perida-----	---	>80	---	---	Moderate	High	Moderate
497A:							
Meenon-----	---	>80	---	---	Moderate	High	Moderate
515A:							
Manitowish-----	---	>80	---	---	Low	Low	Moderate
521A:							
Dody-----	---	>80	---	---	High	High	Moderate
524E:							
Rock outcrop.							
Frogcreek-----	Dense material	40-60	---	---	Moderate	Moderate	Moderate
Metonga-----	Bedrock (lithic)	20-40	---	---	Moderate	Low	High
542B:							
Haugen, very stony----	Dense material	60-80	---	---	Moderate	Moderate	Moderate
Haugen-----	Dense material	60-80	---	---	Moderate	Moderate	Moderate
542C:							
Haugen, very stony----	Dense material	60-80	---	---	Moderate	Moderate	Moderate
Haugen-----	Dense material	60-80	---	---	Moderate	Moderate	Moderate
543B:							
Anigon-----	---	>80	---	---	Moderate	Moderate	Moderate
543C2:							
Anigon-----	---	>80	---	---	Moderate	Moderate	Moderate
544F:							
Menahga-----	---	>80	---	---	Low	Low	High
Mahtomedi-----	---	>80	---	---	Low	Low	Moderate
555A:							
Fordum-----	---	>80	---	---	High	High	Low
574B:							
Sayner-----	---	>80	---	---	Low	Low	High

Table 29.--Soil Features--Continued

Map symbol and soil name	Restrictive layer		Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Initial	Total		Uncoated steel	Concrete
		In	In	In			
574C: Sayner-----	---	>80	---	---	Low	Low	High
574E: Sayner-----	---	>80	---	---	Low	Low	High
579B: Parkfalls-----	Dense material	30-50	---	---	High	Moderate	Moderate
600A: Haplosaprists.  Psammaquents.							
615B: Cress-----	---	>80	---	---	Low	Low	Moderate
615C: Cress-----	---	>80	---	---	Low	Low	Moderate
615D: Cress-----	---	>80	---	---	Low	Low	Moderate
623A: Capitola-----	Dense material	20-40	---	---	High	High	Moderate
624A: Ossmer-----	---	>80	---	---	Moderate	Moderate	Moderate
632A: Aftad-----	---	>80	---	---	Moderate	Moderate	Moderate
632B: Aftad-----	---	>80	---	---	Moderate	Moderate	Moderate
632C: Aftad-----	---	>80	---	---	Moderate	Moderate	Moderate
633F: Pence-----	---	>80	---	---	Low	Low	Moderate
Padus-----	---	>80	---	---	Moderate	Low	Moderate
648B: Sconsin-----	Dense material	20-38	---	---	Moderate	Moderate	Moderate
670C: Keweenaw-----	---	>80	---	---	Low	Low	Moderate
Pence-----	---	>80	---	---	Low	Low	Moderate
670E: Keweenaw-----	---	>80	---	---	Low	Low	Moderate
Pence-----	---	>80	---	---	Low	Low	Moderate
671B: Spoonershill, stony----	---	>80	---	---	Low	Low	Moderate
Spoonershill-----	---	>80	---	---	Low	Low	Moderate

Table 29.--Soil Features--Continued

Map symbol and soil name	Restrictive layer		Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Initial	Total		Uncoated steel	Concrete
		In	In	In			
680B: Stanberry, stony-----	Dense material	40-60	---	---	Moderate	Moderate	Moderate
Pence, stony-----	---	>80	---	---	Low	Low	Moderate
683A: Tipler-----	---	>80	---	---	Moderate	Moderate	Moderate
706A: Winterfield-----	---	>80	---	---	Low	Low	Low
Totagatic-----	---	>80	---	---	Moderate	High	Moderate
724A: Rib-----	---	>80	---	---	High	High	Moderate
Rock outcrop.							
726B: Sissabagama-----	---	>80	---	---	Low	Low	Moderate
733A: Wozny-----	Dense material	40-60	---	---	High	High	Moderate
771A: Lenroot-----	---	>80	---	---	Low	Low	Moderate
827A: Scoba-----	---	>80	---	---	Moderate	Moderate	Moderate
853C: Frogcreek-----	Dense material	40-60	---	---	Moderate	Moderate	Moderate
Stinnett-----	Dense material	40-60	---	---	Moderate	Moderate	Moderate
Wozny-----	Dense material	40-60	---	---	High	High	Moderate
856B: Stinnett-----	Dense material	40-60	---	---	Moderate	Moderate	Moderate
857B: Frogcreek-----	Dense material	40-60	---	---	Moderate	Moderate	Moderate
857C: Frogcreek-----	Dense material	40-60	---	---	Moderate	Moderate	Moderate
873B: Stanberry-----	Dense material	40-60	---	---	Moderate	Moderate	Moderate
873C: Stanberry-----	Dense material	40-60	---	---	Moderate	Moderate	Moderate
873D: Stanberry-----	Dense material	40-60	---	---	Moderate	Moderate	Moderate
905A: Cublake-----	---	>80	---	---	Low	Low	High
926A: Flink-----	---	>80	---	---	Moderate	Low	High

Table 29.--Soil Features--Continued

Map symbol and soil name	Restrictive layer		Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Initial	Total		Uncoated steel	Concrete
		In	In	In			
943D:							
Stanberry-----	Dense material	40-60	---	---	Moderate	Moderate	Moderate
Greenwood-----	---	>80	---	---	High	Moderate	High
948A:							
Billyboy-----	---	>80	---	---	Moderate	Moderate	Moderate
970C:							
Keweenaw-----	---	>80	---	---	Low	Low	Moderate
Pence-----	---	>80	---	---	Low	Low	Moderate
Greenwood-----	---	>80	---	---	High	Moderate	High
970E:							
Keweenaw-----	---	>80	---	---	Low	Low	Moderate
Pence-----	---	>80	---	---	Low	Low	Moderate
Greenwood-----	---	>80	---	---	High	Moderate	High
1070C:							
Fremstadt-----	---	>80	---	---	Low	Low	Moderate
Cress-----	---	>80	---	---	Low	Low	Moderate
1070D:							
Fremstadt-----	---	>80	---	---	Low	Low	Moderate
Cress-----	---	>80	---	---	Low	Low	Moderate
1080B:							
Spoonerhill-----	---	>80	---	---	Low	Low	Moderate
Spoonerhill, stony----	---	>80	---	---	Low	Low	Moderate
Cress-----	---	>80	---	---	Low	Low	Moderate
1653C:							
Stanberry-----	Dense material	40-60	---	---	Moderate	Moderate	Moderate
Parkfalls-----	Dense material	30-50	---	---	High	Moderate	Moderate
Wozny-----	Dense material	40-60	---	---	High	High	Moderate
2015.							
Pits							
2050.							
Landfill							
3011A:							
Barronett-----	---	>80	---	---	High	High	Moderate
3125A:							
Meehan-----	---	>80	---	---	Low	Low	High
3126A:							
Wurtsmith-----	---	>80	---	---	Low	Low	High

Table 29.--Soil Features--Continued

Map symbol and soil name	Restrictive layer		Subsidence		Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Initial	Total		Uncoated steel	Concrete
		In	In	In			
3276A: Au Gres-----	---	>80	---	---	Low	Low	High
3312B: Glendenning, very stony	Dense material	60-80	---	---	Moderate	Moderate	Moderate
Glendenning-----	Dense material	60-80	---	---	Moderate	Moderate	Moderate
3336A: Fenander-----	---	>80	---	---	High	High	Low
3403A: Loxley-----	---	>80	6-18	50-55	High	Moderate	High
Beseman-----	---	>80	4-18	12-36	High	Moderate	High
Dawson-----	---	>80	4-18	30-36	High	Moderate	High
3424C: Frogcreek-----	Dense material	40-60	---	---	Moderate	Moderate	Moderate
Magroc-----	Bedrock (lithic)	40-60	---	---	Moderate	Moderate	Moderate
Stinnett-----	Dense material	40-60	---	---	Moderate	Moderate	Moderate
Rock outcrop.							
3446A: Newson-----	---	>80	---	---	Moderate	High	High
3448B: Grettum-----	---	>80	---	---	Low	Low	Moderate
3448C: Grettum-----	---	>80	---	---	Low	Low	Moderate
3516A: Slimlake-----	---	>80	---	---	Low	Low	Moderate
3629B: Perida-----	---	>80	---	---	Moderate	High	Moderate
M-W. Miscellaneous water							
W. Water							





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# Glossary

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Many of the terms relating to landforms, geology, and geomorphology are defined in more detail in the “National Soil Survey Handbook” (available in local offices of the Natural Resources Conservation Service or on the Internet).

**Ablation till.** Loose, relatively permeable earthy material deposited during the downwasting of nearly static glacial ice, either contained within or accumulated on the surface of the glacier.

**Aeration, soil.** The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

**Aggregate, soil.** Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

**Alluvium.** Unconsolidated material, such as gravel, sand, silt, clay, and various mixtures of these, deposited on land by running water.

**Alpha,alpha-dipyridyl.** A compound that when dissolved in ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction implies reducing conditions and the likely presence of redoximorphic features.

**Aquic conditions.** Current soil wetness characterized by saturation, reduction, and redoximorphic features.

**Argillic horizon.** A subsoil horizon characterized by an accumulation of illuvial clay.

**Aspect.** The direction toward which a slope faces. Also called slope aspect.

**Association, soil.** A group of soils or miscellaneous areas geographically associated in a characteristic repeating pattern and defined and delineated as a single map unit.

**Available water capacity (available moisture capacity).** The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as:

Very low .....	0 to 3
Low .....	3 to 6
Moderate .....	6 to 9
High .....	9 to 12
Very high .....	more than 12

**Backslope.** The position that forms the steepest and generally linear, middle portion of a hillslope. In profile, backslopes are commonly bounded by a convex shoulder above and a concave footslope below.

**Basal till.** Compact till deposited beneath the glacial ice.

**Base saturation.** The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.

**Base slope** (geomorphology). A geomorphic component of hills consisting of the concave to linear (perpendicular to the contour) slope that, regardless of the

lateral shape, forms an apron or wedge at the bottom of a hillside dominated by colluvium and slope-wash sediments (for example, slope alluvium).

**Beach deposits.** Material, such as sand and gravel, that is generally laid down parallel to an active or relict shoreline of a postglacial or glacial lake.

**Beach ridge.** A low, essentially continuous mound of beach or beach-and-dune material accumulated by the action of waves and currents on the backshore of a beach, beyond the present limit of storm waves or the reach of ordinary tides, and occurring singly or as one of a series of approximately parallel deposits. The ridges are roughly parallel to the shoreline and represent successive positions of an advancing shoreline.

**Bedding plane.** A planar or nearly planar bedding surface that visibly separates each successive layer of stratified sediment or rock (of the same or different lithology) from the preceding or following layer; a plane of deposition. It commonly marks a change in the circumstances of deposition and may show a parting, a color difference, a change in particle size, or various combinations of these. The term is commonly applied to any bedding surface, even one that is conspicuously bent or deformed by folding.

**Bedrock.** The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

**Bedrock-controlled topography.** A landscape where the configuration and relief of the landforms are determined or strongly influenced by the underlying bedrock.

**Bench terrace.** A raised, level or nearly level strip of earth constructed on or nearly on a contour, supported by a barrier of rocks or similar material, and designed to make the soil suitable for tillage and to prevent accelerated erosion.

**Bisequum.** Two sequences of soil horizons, each of which consists of an illuvial horizon and the overlying eluvial horizons.

**Blowout.** A saucer-, cup-, or trough-shaped depression formed by wind erosion on a preexisting dune or other sand deposit, especially in an area of shifting sand or loose soil or where protective vegetation is disturbed or destroyed; the adjoining accumulation of sand derived from the depression, where recognizable, is commonly included. Blowouts are commonly small.

**Board foot.** A unit of measurement represented by a board 1 foot wide, 1 foot long, and 1 inch thick.

**Bog.** Waterlogged, spongy ground, consisting primarily of mosses, containing acidic, decaying vegetation (such as sphagnum, sedges, and heaths) that develops into peat.

**Boulders.** Rock fragments larger than 2 feet (60 centimeters) in diameter.

**Brush management.** Use of mechanical, chemical, or biological methods to make conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.

**Calcareous soil.** A soil containing enough calcium carbonate (commonly combined with magnesium carbonate) to effervesce visibly when treated with cold, dilute hydrochloric acid.

**California bearing ratio (CBR).** The load-supporting capacity of a soil as compared to that of standard crushed limestone, expressed as a ratio. First standardized in California. A soil having a CBR of 16 supports 16 percent of the load that would be supported by standard crushed limestone, per unit area, with the same degree of distortion.

**Canopy.** The leafy crown of trees or shrubs. (See Crown.)

**Capillary water.** Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.

**Catena.** A sequence, or “chain,” of soils on a landscape that formed in similar kinds of parent material and under similar climatic conditions but that have different characteristics as a result of differences in relief and drainage.

**Cation.** An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.

**Cation-exchange capacity.** The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.

**Catsteps.** See Terracettes.

**Channery soil material.** Soil material that has, by volume, 15 to 35 percent thin, flat fragments of sandstone, shale, slate, limestone, or schist as much as 6 inches (15 centimeters) along the longest axis. A single piece is called a channer.

**Chemical treatment.** Control of unwanted vegetation through the use of chemicals.

**Chiseling.** Tillage with an implement having one or more soil-penetrating points that shatter or loosen hard, compacted layers to a depth below normal plow depth.

**Clay.** As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

**Clay depletions.** See Redoximorphic features.

**Clay film.** A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.

**Climax plant community.** The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.

**Closed depression (map symbol).** A shallow, saucer-shaped area that is slightly lower on the landscape than the surrounding area and is without a natural outlet for surface drainage. Typically less than 4 acres.

**Coarse textured soil.** Sand or loamy sand.

**Cobble (or cobblestone).** A rounded or partly rounded fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.

**Cobbly soil material.** Material that has 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material has 35 to 60 percent of these rock fragments, and extremely cobbly soil material has more than 60 percent.

**COLE (coefficient of linear extensibility).** See Linear extensibility.

**Colluvium.** Unconsolidated, unsorted earth material being transported or deposited on side slopes and/or at the base of slopes by mass movement (e.g., direct gravitational action) and by local, unconcentrated runoff.

**Complex slope.** Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.

**Complex, soil.** A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.

**Concretions.** See Redoximorphic features.

**Conservation cropping system.** Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the effects of the soil-depleting crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.

- Conservation tillage.** A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.
- Consistence, soil.** Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the "Soil Survey Manual."
- Contour stripcropping.** Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.
- Coprogenous earth (sedimentary peat).** A type of limnic layer composed predominantly of fecal material derived from aquatic animals.
- Cord.** A unit of measurement of stacked wood. A standard cord occupies 128 cubic feet with dimensions of 4 feet by 4 feet by 8 feet.
- Corrosion (geomorphology).** A process of erosion whereby rocks and soil are removed or worn away by natural chemical processes, especially by the solvent action of running water, but also by other reactions, such as hydrolysis, hydration, carbonation, and oxidation.
- Corrosion (soil survey interpretations).** Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.
- Cover crop.** A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.
- Crop residue management.** Returning crop residue to the soil, which helps to maintain soil structure, organic matter content, and fertility and helps to control erosion.
- Cropping system.** Growing crops according to a planned system of rotation and management practices.
- Cross-slope farming.** Deliberately conducting farming operations on sloping farmland in such a way that tillage is across the general slope.
- Crown.** The upper part of a tree or shrub, including the living branches and their foliage.
- Culmination of the mean annual increment (CMAI).** The average annual increase per acre in the volume of a stand. Computed by dividing the total volume of the stand by its age. As the stand increases in age, the mean annual increment continues to increase until mortality begins to reduce the rate of increase. The point where the stand reaches its maximum annual rate of growth is called the culmination of the mean annual increment.
- Cut or fill area (map symbol).** A small area where the original soil profile has been altered by the addition or removal of more than about 1 foot of soil material. Includes former pits that have been reclaimed. Each symbol represents one area or several closely grouped areas totaling less than 4 acres.
- Cutbanks cave (in tables).** The walls of excavations tend to cave in or slough.
- Decreasers.** The most heavily grazed climax range plants. Because they are the most palatable, they are the first to be destroyed by overgrazing.
- Deferred grazing.** Postponing grazing or resting grazing land for a prescribed period.
- Delta.** A body of alluvium having a surface that is fan shaped and nearly flat; deposited at or near the mouth of a river or stream where it enters a body of relatively quiet water, generally a sea or lake.
- Dense layer (in tables).** A very firm, massive layer that has a bulk density of more than 1.8 grams per cubic centimeter. Such a layer affects the ease of digging and can affect filling and compacting.

- Depression.** Any relatively sunken part of the earth's surface; especially a low-lying area surrounded by higher ground. A closed depression has no natural outlet for surface drainage. An open depression has a natural outlet for surface drainage.
- Depth, soil.** Generally, the thickness of the soil over bedrock. Very deep soils are more than 60 inches deep over bedrock; deep soils, 40 to 60 inches; moderately deep, 20 to 40 inches; shallow, 10 to 20 inches; and very shallow, less than 10 inches.
- Disintegration moraine.** A drift topography characterized by chaotic mounds and pits, generally randomly oriented, developed in supraglacial drift by collapse and flow as the underlying stagnant ice melted. Slopes may be steep and unstable. Abrupt changes between materials of differing lithology are common.
- Diversion (or diversion terrace).** A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.
- Drainage class (natural).** Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—*excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained, and very poorly drained*. These classes are defined in the "Soil Survey Manual."
- Drainage, surface.** Runoff, or surface flow of water, from an area.
- Drainageway.** A general term for a course or channel along which water moves in draining an area. A term restricted to relatively small, linear depressions that at some time move concentrated water and either do not have a defined channel or have only a small defined channel.
- Drift.** A general term applied to all mineral material (clay, silt, sand, gravel, and boulders) transported by a glacier and deposited directly by or from the ice or transported by running water emanating from a glacier. Drift includes unstratified material (till) that forms moraines and stratified deposits that form outwash plains, eskers, kames, varves, and glaciofluvial sediments. The term is generally applied to Pleistocene glacial deposits in areas that no longer contain glaciers.
- Drumlin.** A low, smooth, elongated oval hill, mound, or ridge of compact till that has a core of bedrock or drift. It commonly has a blunt nose facing the direction from which the ice approached and a gentler slope tapering in the other direction. The longer axis is parallel to the general direction of glacier flow. Drumlins are products of streamline (laminar) flow of glaciers, which molded the subglacial floor through a combination of erosion and deposition.
- Dry spot (map symbol).** A small area of moderately well drained to excessively drained soil within a poorly drained or very poorly drained area of mineral soil, or a somewhat poorly drained to excessively drained soil within a map unit consisting mainly of organic soil. Each symbol represents one area or several closely grouped areas totaling less than 4 acres.
- Duff.** A generally firm organic layer on the surface of mineral soils. It consists of fallen plant material that is in the process of decomposition and includes everything from the litter on the surface to underlying pure humus.
- Eluviation.** The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.
- End moraine.** A ridgelike accumulation produced at the outer margin of an actively flowing glacier at any given time.
- Endosaturation.** A type of saturation of the soil in which all horizons between the upper boundary of saturation and a depth of 2 meters are saturated.
- Eolian deposit.** Sand-, silt-, or clay-sized clastic material transported and deposited primarily by wind, commonly in the form of a dune or a sheet of sand or loess.



**Ephemeral stream.** A stream, or reach of a stream, that flows only in direct response to precipitation. It receives no long-continued supply from melting snow or other source, and its channel is above the water table at all times.

**Episaturation.** A type of saturation indicating a perched water table in a soil in which saturated layers are underlain by one or more unsaturated layers within 2 meters of the surface.

**Erosion.** The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.

*Erosion* (geologic). Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.

*Erosion* (accelerated). Erosion much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

**Erosion pavement.** A surficial lag concentration or layer of gravel and other rock fragments that remains on the soil surface after sheet or rill erosion or wind has removed the finer soil particles and that tends to protect the underlying soil from further erosion.

**Erosion surface.** A land surface shaped by the action of erosion, especially by running water.

**Escarpment.** A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. Most commonly applied to cliffs produced by differential erosion.

**Escarpment, bedrock (map symbol).** A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. Exposed material is hard or soft bedrock.

**Escarpment, nonbedrock (map symbol).** A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or faulting. Exposed material is nonsoil or very shallow soil.

**Esker.** A long, narrow, sinuous, steep-sided ridge of stratified sand and gravel deposited as the bed of a stream flowing in an ice tunnel within or below the ice (subglacial) or between ice walls on top of the ice of a wasting glacier and left behind as high ground when the ice melted. Eskers range in length from less than a kilometer to more than 160 kilometers and in height from 3 to 30 meters.

**Fan remnant.** A general term for landforms that are the remaining parts of older fan landforms, such as alluvial fans, that have been either dissected or partially buried.

**Fertility, soil.** The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.

**Fibric soil material (peat).** The least decomposed of all organic soil material. Peat contains a large amount of well preserved fiber that is readily identifiable according to botanical origin. Peat has the lowest bulk density and the highest water content at saturation of all organic soil material.

**Field moisture capacity.** The moisture content of a soil, expressed as a percentage of the oven-dry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called *normal field capacity*, *normal moisture capacity*, or *capillary capacity*.

**Fine textured soil.** Sandy clay, silty clay, or clay.

**Firebreak.** An area cleared of flammable material to stop or help control creeping or running fires. It also serves as a line from which to work and to facilitate the movement of firefighters and equipment. Designated roads also serve as firebreaks.



- Flaggy soil material.** Material that has, by volume, 15 to 35 percent flagstones. Very flaggy soil material has 35 to 60 percent flagstones, and extremely flaggy soil material has more than 60 percent flagstones.
- Flagstone.** A thin fragment of sandstone, limestone, slate, shale, or (rarely) schist 6 to 15 inches (15 to 38 centimeters) long.
- Flood plain.** The nearly level plain that borders a stream and is subject to flooding unless protected artificially.
- Flood-plain landforms.** A variety of constructional and erosional features produced by stream channel migration and flooding. Examples include backswamps, flood-plain splays, meanders, meander belts, meander scrolls, oxbow lakes, and natural levees.
- Flood-plain splay.** A fan-shaped deposit or other outspread deposit formed where an overloaded stream breaks through a levee (natural or artificial) and deposits its material (commonly coarse grained) on the flood plain.
- Flood-plain step.** An essentially flat, terrace-like alluvial surface within a valley that is frequently covered by floodwater from the present stream; any approximately horizontal surface still actively modified by fluvial scour and/or deposition. May occur individually or as a series of steps.
- Fluvial.** Of or pertaining to rivers or streams; produced by stream or river action.
- Footslope.** The concave surface at the base of a hillslope. A footslope is a transition zone between upslope sites of erosion and transport (shoulders and backslopes) and downslope sites of deposition (toeslopes).
- Forb.** Any herbaceous plant not a grass or a sedge.
- Forest cover.** All trees and other woody plants (underbrush) covering the ground in a forest.
- Forest habitat type.** An association of dominant tree and ground flora species in a climax community.
- Fragipan.** A loamy, brittle subsurface horizon low in porosity and content of organic matter and low or moderate in clay but high in silt or very fine sand. A fragipan appears cemented and restricts roots. When dry, it is hard or very hard and has a higher bulk density than the horizon or horizons above. When moist, it tends to rupture suddenly under pressure rather than to deform slowly.
- Genesis, soil.** The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.
- Glaciofluvial deposits.** Material moved by glaciers and subsequently sorted and deposited by streams flowing from the melting ice. The deposits are stratified and occur in the form of outwash plains, valley trains, deltas, kames, eskers, and kame terraces.
- Glaciolacustrine deposits.** Material ranging from fine clay to sand derived from glaciers and deposited in glacial lakes mainly by glacial meltwater. Many deposits are bedded or laminated.
- Gleyed soil.** Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.
- Graded stripcropping.** Growing crops in strips that grade toward a protected waterway.
- Grassed waterway.** A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.
- Gravel.** Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.
- Gravel pit (map symbol).** An open excavation from which soil and underlying material have been removed and used, without crushing, as a source of sand or gravel. Typically less than 4 acres.

**Gravelly soil material.** Material that has 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

**Gravelly spot (map symbol).** An area where the surface layer has more than 35 percent, by volume, rock fragments that are mostly less than 3 inches in diameter within an area that has less than 15 percent rock fragments. Typically less than 4 acres.

**Green manure crop** (agronomy). A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.

**Ground water.** Water filling all the unblocked pores of the material below the water table.

**Gully.** A small channel with steep sides caused by erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage; a rill is of lesser depth and can be smoothed over by ordinary tillage.

**Gully (map symbol).** A small channel with steep sides, cut by running water, through which water ordinarily runs only after a rain or after melting of snow or ice. It generally is an obstacle to wheeled vehicles and is too deep to be obliterated by ordinary tillage.

**Hard bedrock.** Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.

**Hard to reclaim** (in tables). Reclamation is difficult after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

**Head slope (geomorphology).** A geomorphic component of hills consisting of a laterally concave area of a hillside, especially at the head of a drainageway. The overland waterflow is converging.

**Hemic soil material (mucky peat).** Organic soil material intermediate in degree of decomposition between the less decomposed fibric material and the more decomposed sapric material.

**High-residue crops.** Such crops as small grain and corn used for grain. If properly managed, residue from these crops can be used to control erosion until the next crop in the rotation is established. These crops return large amounts of organic matter to the soil.

**Hill.** A generic term for an elevated area of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a well defined outline. Slopes are generally more than 15 percent. The distinction between a hill and a mountain is arbitrary and may depend on local usage.

**Hillslope.** A generic term for the steeper part of a hill between its summit and the drainage line, valley flat, or depression floor at the base of a hill.

**Horizon, soil.** A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the "Soil Survey Manual." The major horizons of mineral soil are as follows:

*O horizon.*—An organic layer of fresh and decaying plant residue.

*L horizon.*—A layer of organic and mineral limnic materials, including coprogenous earth (sedimentary peat), diatomaceous earth, and marl.

*A horizon.*—The mineral horizon at or near the surface in which an accumulation

of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

*E horizon.*—The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

*B horizon.*—The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

*C horizon.*—The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

*Cr horizon.*—Soft, consolidated bedrock beneath the soil.

*R layer.*—Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.

**Humus.** The well decomposed, more or less stable part of the organic matter in mineral soils.

**Hydrologic soil groups.** Refers to soils grouped according to their runoff potential.

The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties are depth to a seasonal high water table, the infiltration rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

**Ice-walled lake plain.** A relict surface marking the floor of an extinct lake basin that was formed on solid ground and surrounded by stagnant ice in a stable or unstable superglacial environment on stagnation moraines. As the ice melted, the lake plain became perched above the adjacent landscape. The lake plain is well sorted, generally fine textured, stratified deposits.

**Igneous rock.** Rock that was formed by cooling and solidification of magma and that has not been changed appreciably by weathering since its formation. Major varieties include plutonic and volcanic rock (e.g., andesite, basalt, and granite).

**Illuviation.** The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

**Impervious soil.** A soil through which water, air, or roots penetrate slowly or not at all. No soil is absolutely impervious to air and water all the time.

**Increasers.** Species in the climax vegetation that increase in amount as the more desirable plants are reduced by close grazing. Increasers commonly are the shorter plants and the less palatable to livestock.

**Infiltration.** The downward entry of water into the immediate surface of soil or other material, as contrasted with percolation, which is movement of water through soil layers or material.

**Infiltration capacity.** The maximum rate at which water can infiltrate into a soil under a given set of conditions.

**Infiltration rate.** The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

**Intake rate.** The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake

rate for design purposes is not a constant but is a variable depending on the net irrigation application. The rate of water intake, in inches per hour, is expressed as follows:

Less than 0.2 .....	very low
0.2 to 0.4 .....	low
0.4 to 0.75 .....	moderately low
0.75 to 1.25 .....	moderate
1.25 to 1.75 .....	moderately high
1.75 to 2.5 .....	high
More than 2.5 .....	very high

**Interfluve.** A landform composed of the relatively undissected upland or ridge between two adjacent valleys containing streams flowing in the same general direction. An elevated area between two drainageways that sheds water to those drainageways.

**Interfluve** (geomorphology). A geomorphic component of hills consisting of the uppermost, comparatively level or gently sloping area of a hill; shoulders of backwearing hillslopes can narrow the upland or can merge, resulting in a strongly convex shape.

**Intermittent stream.** A stream, or reach of a stream, that does not flow year-round but that is commonly dry for 3 or more months out of 12 and whose channel is generally below the local water table. It flows only during wet periods or when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

**Invaders.** On range, plants that encroach into an area and grow after the climax vegetation has been reduced by grazing. Generally, plants invade following disturbance of the surface.

**Iron depletions.** See Redoximorphic features.

**Irrigation.** Application of water to soils to assist in production of crops. Methods of irrigation are:

*Basin.*—Water is applied rapidly to nearly level plains surrounded by levees or dikes.

*Border.*—Water is applied at the upper end of a strip in which the lateral flow of water is controlled by small earth ridges called border dikes, or borders.

*Controlled flooding.*—Water is released at intervals from closely spaced field ditches and distributed uniformly over the field.

*Corrugation.*—Water is applied to small, closely spaced furrows or ditches in fields of close-growing crops or in orchards so that it flows in only one direction.

*Drip (or trickle).*—Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.

*Furrow.*—Water is applied in small ditches made by cultivation implements. Furrows are used for tree and row crops.

*Sprinkler.*—Water is sprayed over the soil surface through pipes or nozzles from a pressure system.

*Subirrigation.*—Water is applied in open ditches or tile lines until the water table is raised enough to wet the soil.

*Wild flooding.*—Water, released at high points, is allowed to flow onto an area without controlled distribution.

**Island (map symbol).** A small area of mineral soil within a body of water and above the normal water level. Each symbol represents one island or several closely grouped islands totaling less than 4 acres.

**Kame.** A low mound, knob, hummock, or short irregular ridge composed of stratified sand and gravel deposited by a subglacial stream as a fan or delta at the margin

of a melting glacier; by a supraglacial stream in a low place or hole on the surface of the glacier; or as a ponded deposit on the surface or at the margin of stagnant ice.

**Karst** (topography). A kind of topography that formed in limestone, gypsum, or other soluble rocks by dissolution and that is characterized by closed depressions, sinkholes, caves, and underground drainage.

**Knoll**. A small, low, rounded hill rising above adjacent landforms.

**K<sub>sat</sub>**. Saturated hydraulic conductivity. (See Permeability.)

**Lacustrine deposit**. Material deposited in lake water and exposed when the water level is lowered or the elevation of the land is raised.

**Lake plain**. A nearly level surface marking the floor of an extinct lake filled by well sorted, generally fine textured, stratified deposits, commonly containing varves.

**Lake terrace**. A narrow shelf, partly cut and partly built, produced along a lakeshore in front of a scarp line of low cliffs and later exposed when the water level falls.

**Landslide**. A general, encompassing term for most types of mass movement landforms and processes involving the downslope transport and outward deposition of soil and rock materials caused by gravitational forces; the movement may or may not involve saturated materials. The speed and distance of movement, as well as the amount of soil and rock material, vary greatly.

**Large stones** (in tables). Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.

**Leaching**. The removal of soluble material from soil or other material by percolating water.

**Linear extensibility**. Refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. Linear extensibility is used to determine the shrink-swell potential of soils. It is an expression of the volume change between the water content of the clod at  $1/3$ - or  $1/10$ -bar tension (33kPa or 10kPa tension) and oven dryness. Volume change is influenced by the amount and type of clay minerals in the soil. The volume change is the percent change for the whole soil. If it is expressed as a fraction, the resulting value is COLE, coefficient of linear extensibility.

**Liquid limit**. The moisture content at which the soil passes from a plastic to a liquid state.

**Loam**. Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

**Loess**. Material transported and deposited by wind and consisting dominantly of silt-sized particles.

**Low strength**. The soil is not strong enough to support loads.

**Low-residue crops**. Such crops as corn used for silage, peas, beans, and potatoes. Residue from these crops is not adequate to control erosion until the next crop in the rotation is established. These crops return little organic matter to the soil.

**Marl**. An earthy, unconsolidated deposit consisting chiefly of calcium carbonate mixed with clay in approximately equal proportions; formed primarily under freshwater lacustrine conditions but also formed in more saline environments.

**Mass movement**. A generic term for the dislodgment and downslope transport of soil and rock material as a unit under direct gravitational stress.

**Masses**. See Redoximorphic features.

**Mechanical treatment**. Use of mechanical equipment for seeding, brush management, and other management practices.

**Medium textured soil**. Very fine sandy loam, loam, silt loam, or silt.

**Metamorphic rock**. Rock of any origin altered in mineralogical composition, chemical composition, or structure by heat, pressure, and movement at depth in the earth's crust. Nearly all such rocks are crystalline.

**Mine spoil.** An accumulation of displaced earthy material, rock, or other waste material removed during mining or excavation. Also called earthy fill.

**Mineral soil.** Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.

**Minimum tillage.** Only the tillage essential to crop production and prevention of soil damage.

**Miscellaneous area.** A kind of map unit that has little or no natural soil and supports little or no vegetation.

**Moderately coarse textured soil.** Coarse sandy loam, sandy loam, or fine sandy loam.

**Moderately fine textured soil.** Clay loam, sandy clay loam, or silty clay loam.

**Mollic epipedon.** A thick, dark, humus-rich surface horizon (or horizons) that has high base saturation and pedogenic soil structure. It may include the upper part of the subsoil.

**Moraine.** In terms of glacial geology, a mound, ridge, or other topographically distinct accumulation of unsorted, unstratified drift, predominantly till, deposited primarily by the direct action of glacial ice in a variety of landforms. Also, a general term for a landform composed mainly of till (except for kame moraines, which are composed mainly of stratified outwash) that has been deposited by a glacier. Some types of moraines are disintegration, end, ground, kame, lateral, recessional, and terminal.

**Morphology, soil.** The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.

**Mottling, soil.** Irregular spots of different colors that vary in number and size. Descriptive terms are as follows: abundance—*few*, *common*, and *many*; size—*fine*, *medium*, and *coarse*; and contrast—*faint*, *distinct*, and *prominent*. The size measurements are of the diameter along the greatest dimension. *Fine* indicates less than 5 millimeters (about 0.2 inch); *medium*, from 5 to 15 millimeters (about 0.2 to 0.6 inch); and *coarse*, more than 15 millimeters (about 0.6 inch).

**Muck.** Dark, finely divided, well decomposed organic soil material. (See Sapric soil material.)

**Mudstone.** A blocky or massive, fine grained sedimentary rock in which the proportions of clay and silt are approximately equal. Also, a general term for such material as clay, silt, claystone, siltstone, shale, and argillite and that should be used only when the amounts of clay and silt are not known or cannot be precisely identified.

**Munsell notation.** A designation of color by degrees of three simple variables—hue, value, and chroma. For example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.

**Neutral soil.** A soil having a pH value of 6.6 to 7.3. (See Reaction, soil.)

**Nodules.** See Redoximorphic features.

**Nose slope** (geomorphology). A geomorphic component of hills consisting of the projecting end (laterally convex area) of a hillside. The overland waterflow is predominantly divergent. Nose slopes consist dominantly of colluvium and slope-wash sediments (for example, slope alluvium).

**Nutrient, plant.** Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.



**Organic matter.** Plant and animal residue in the soil in various stages of decomposition. The content of organic matter in the surface layer is described as follows:

Very low .....	less than 0.5 percent
Low .....	0.5 to 1.0 percent
Moderately low .....	1.0 to 2.0 percent
Moderate .....	2.0 to 4.0 percent
High .....	4.0 to 8.0 percent
Very high .....	more than 8.0 percent

**Outwash.** Stratified and sorted sediments (chiefly sand and gravel) removed or “washed out” from a glacier by meltwater streams and deposited in front of or beyond the end moraine or the margin of a glacier. The coarser material is deposited nearer to the ice.

**Outwash plain.** An extensive lowland area of coarse textured glaciofluvial material. An outwash plain is commonly smooth; where pitted, it generally is low in relief.

**Parent material.** The unconsolidated organic and mineral material in which soil forms.

**Peat.** Unconsolidated material, largely undecomposed organic matter, that has accumulated under excess moisture. (See Fibric soil material.)

**Ped.** An individual natural soil aggregate, such as a granule, a prism, or a block.

**Pedisediment.** A layer of sediment, eroded from the shoulder and backslope of an erosional slope, that lies on and is being (or was) transported across a gently sloping erosional surface at the foot of a receding hill or mountain slope.

**Pedon.** The smallest volume that can be called “a soil.” A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

**Percolation.** The movement of water through the soil.

**Perennial water (map symbol).** A small, natural or constructed lake, pond, or pit that contains water most of the year. Each symbol represents one area of water or several closely grouped areas of water totaling less than 4 acres.

**Permeability.** The quality of the soil that enables water or air to move downward through the profile. The rate at which a saturated soil transmits water is accepted as a measure of this quality. In soil physics, the rate is referred to as “saturated hydraulic conductivity,” which is defined in the “Soil Survey Manual.” In line with conventional usage in the engineering profession and with traditional usage in published soil surveys, this rate of flow continues to be expressed as “permeability.” Terms describing permeability, measured in inches per hour, are as follows:

Impermeable .....	less than 0.0015 inch
Very slow .....	0.0015 to 0.06 inch
Slow .....	0.06 to 0.2 inch
Moderately slow .....	0.2 to 0.6 inch
Moderate .....	0.6 inch to 2.0 inches
Moderately rapid .....	2.0 to 6.0 inches
Rapid .....	6.0 to 20 inches
Very rapid .....	more than 20 inches

**pH value.** A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

**Phase, soil.** A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

**Piping** (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

**Pitted outwash plain.** An outwash plain marked by many irregular depressions, such as kettles, shallow pits, and potholes, which formed by melting of incorporated ice masses; common in Wisconsin and Minnesota.

**Pitting** (in tables). Pits caused by melting around ice. They form on the soil after plant cover is removed.

**Plastic limit.** The moisture content at which a soil changes from semisolid to plastic.

**Plasticity index.** The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

**Plateau** (geomorphology). A comparatively flat area of great extent and elevation; specifically, an extensive land region that is considerably elevated (more than 100 meters) above the adjacent lower lying terrain, is commonly limited on at least one side by an abrupt descent, and has a flat or nearly level surface. A comparatively large part of a plateau surface is near summit level.

**Plowpan.** A compacted layer formed in the soil directly below the plowed layer.

**Poletimber.** Hardwood trees ranging from 5 to 11 inches in diameter and conifers ranging from 5 to 9 inches in diameter at breast height.

**Ponding.** Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

**Poorly graded.** Refers to a coarse grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

**Pore linings.** See Redoximorphic features.

**Potential native plant community.** See Climax plant community.

**Potential rooting depth (effective rooting depth).** Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

**Prescribed burning.** Deliberately burning an area for specific management purposes, under the appropriate conditions of weather and soil moisture and at the proper time of day.

**Productivity, soil.** The capability of a soil for producing a specified plant or sequence of plants under specific management.

**Profile, soil.** A vertical section of the soil extending through all its horizons and into the parent material.

**Proper grazing use.** Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and promotes the accumulation of litter and mulch necessary to conserve soil and water.

**Rangeland.** Land on which the potential natural vegetation is predominantly grasses, grasslike plants, forbs, or shrubs suitable for grazing or browsing. It includes natural grasslands, savannas, many wetlands, some deserts, tundras, and areas that support certain forb and shrub communities.

**Reaction, soil.** A measure of acidity or alkalinity of a soil, expressed as pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Ultra acid .....	less than 3.5
Extremely acid .....	3.5 to 4.4
Very strongly acid .....	4.5 to 5.0
Strongly acid .....	5.1 to 5.5
Moderately acid .....	5.6 to 6.0



Slightly acid .....	6.1 to 6.5
Neutral .....	6.6 to 7.3
Slightly alkaline .....	7.4 to 7.8
Moderately alkaline .....	7.9 to 8.4
Strongly alkaline .....	8.5 to 9.0
Very strongly alkaline .....	9.1 and higher

**Redoximorphic concentrations.** See Redoximorphic features.

**Redoximorphic depletions.** See Redoximorphic features.

**Redoximorphic features.** Redoximorphic features are associated with wetness and result from alternating periods of reduction and oxidation of iron and manganese compounds in the soil. Reduction occurs during saturation with water, and oxidation occurs when the soil is not saturated. Characteristic color patterns are created by these processes. The reduced iron and manganese ions may be removed from a soil if vertical or lateral fluxes of water occur, in which case there is no iron or manganese precipitation in that soil. Wherever the iron and manganese are oxidized and precipitated, they form either soft masses or hard concretions or nodules. Movement of iron and manganese as a result of redoximorphic processes in a soil may result in redoximorphic features that are defined as follows:

1. Redoximorphic concentrations.—These are zones of apparent accumulation of iron-manganese oxides, including:
  - A. Nodules and concretions, which are cemented bodies that can be removed from the soil intact. Concretions are distinguished from nodules on the basis of internal organization. A concretion typically has concentric layers that are visible to the naked eye. Nodules do not have visible organized internal structure; *and*
  - B. Masses, which are noncemented concentrations of substances within the soil matrix; *and*
  - C. Pore linings, i.e., zones of accumulation along pores that may be either coatings on pore surfaces or impregnations from the matrix adjacent to the pores.
2. Redoximorphic depletions.—These are zones of low chroma (chromas less than those in the matrix) where either iron-manganese oxides alone or both iron-manganese oxides and clay have been stripped out, including:
  - A. Iron depletions, i.e., zones that contain low amounts of iron and manganese oxides but have a clay content similar to that of the adjacent matrix; *and*
  - B. Clay depletions, i.e., zones that contain low amounts of iron, manganese, and clay (often referred to as silt coatings or skeletons).
3. Reduced matrix.—This is a soil matrix that has low chroma *in situ* but undergoes a change in hue or chroma within 30 minutes after the soil material has been exposed to air.

**Reduced matrix.** See Redoximorphic features.

**Regolith.** All unconsolidated earth materials above the solid bedrock. It includes material weathered in place from all kinds of bedrock and alluvial, glacial, eolian, lacustrine, and pyroclastic deposits.

**Relief.** The relative difference in elevation between the upland summits and the lowlands or valleys of a given region.

**Residuum (residual soil material).** Unconsolidated, weathered or partly weathered mineral material that accumulated as bedrock disintegrated in place.

**Rill.** A very small, steep-sided channel resulting from erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. A rill

generally is not an obstacle to wheeled vehicles and is shallow enough to be smoothed over by ordinary tillage.

**Riser.** The vertical or steep side slope (e.g., escarpment) of terraces, flood-plain steps, or other stepped landforms; commonly a recurring part of a series of natural, steplike landforms, such as successive stream terraces.

**Road cut.** A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.

**Rock fragments.** Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.

**Rock outcrop (map symbol).** An exposure of bedrock at the surface of the earth. Not used where the named soils of the surrounding map unit are shallow over bedrock. Each symbol represents one exposure or several closely grouped exposures totaling less than 4 acres.

**Root zone.** The part of the soil that can be penetrated by plant roots.

**Runoff.** The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.

**Saline soil.** A soil containing soluble salts in an amount that impairs growth of plants. A saline soil does not contain excess exchangeable sodium.

**Sand.** As a soil separate, individual rock or mineral fragments from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.

**Sandstone.** Sedimentary rock containing dominantly sand-sized particles.

**Sandy spot (map symbol).** An area where the surface layer is loamy fine sand or coarser within an area where the surface layer of the named soils in the surrounding map unit is very fine sandy loam or finer. Typically less than 4 acres.

**Sapling.** A tree ranging from 1 to 5 inches in diameter at breast height.

**Sapric soil material (muck).** The most highly decomposed of all organic soil material. Muck has the least amount of plant fiber, the highest bulk density, and the lowest water content at saturation of all organic soil material.

**Saturated hydraulic conductivity ( $K_{sat}$ ).** See Permeability.

**Saturation.** Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.

**Sawtimber.** Hardwood trees more than 11 inches in diameter and conifers more than 9 inches in diameter at breast height.

**Scarification.** The act of abrading, scratching, loosening, crushing, or modifying the surface to increase water absorption or to provide a more tillable soil.

**Sedimentary rock.** A consolidated deposit of clastic particles, chemical precipitates, or organic remains accumulated at or near the surface of the earth under normal low temperature and pressure conditions. Sedimentary rocks include consolidated equivalents of alluvium, colluvium, drift, and eolian, lacustrine, and marine deposits. Examples are sandstone, siltstone, mudstone, claystone, shale, conglomerate, limestone, dolomite, and coal.

**Seedling.** A tree less than 1 inch in diameter at breast height.

**Sequum.** A sequence consisting of an illuvial horizon and the overlying eluvial horizon. (See Eluviation.)

**Series, soil.** A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.

- Shale.** Sedimentary rock that formed by the hardening of a deposit of clay, silty clay, or silty clay loam and that has a tendency to split into thin layers.
- Sheet erosion.** The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.
- Short, steep slope (map symbol).** A narrow area of soil that is at least two slope classes steeper than the surrounding map unit.
- Shoulder.** The convex, erosional surface near the top of a hillslope. A shoulder is a transition from summit to backslope.
- Shrink-swell** (in tables). The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.
- Side slope** (geomorphology). A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel. Side slopes are dominantly colluvium and slope-wash sediments.
- Silica.** A combination of silicon and oxygen. The mineral form is called quartz.
- Silt.** As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.
- Siltstone.** An indurated silt having the texture and composition of shale but lacking its fine lamination or fissility; a massive mudstone in which silt predominates over clay.
- Similar soils.** Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.
- Sinkhole.** A closed, circular or elliptical depression, commonly funnel shaped, characterized by subsurface drainage and formed either by dissolution of the surface of underlying bedrock (e.g., limestone, gypsum, or salt) or by collapse of underlying caves within bedrock. Complexes of sinkholes in carbonate-rock terrain are the main components of karst topography.
- Site index.** A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75.
- Slope.** The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance.
- Slope alluvium.** Sediment gradually transported down the slopes of mountains or hills primarily by nonchannel alluvial processes (i.e., slope-wash processes) and characterized by particle sorting. Lateral particle sorting is evident on long slopes. In a profile sequence, sediments may be distinguished by differences in size and/or specific gravity of rock fragments and may be separated by stone lines. Burnished pedis and sorting of rounded or subrounded pebbles or cobbles distinguish these materials from unsorted colluvial deposits.
- Slow refill** (in tables). The slow filling of ponds, resulting from restricted permeability in the soil.
- Soft bedrock.** Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.
- Soil.** A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief and by the passage of time.

**Soil separates.** Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand .....	2.0 to 1.0
Coarse sand .....	1.0 to 0.5
Medium sand .....	0.5 to 0.25
Fine sand .....	0.25 to 0.10
Very fine sand .....	0.10 to 0.05
Silt .....	0.05 to 0.002
Clay .....	less than 0.002

**Solum.** The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

**Stone line.** In a vertical cross section, a line formed by scattered fragments or a discrete layer of angular and subangular rock fragments (commonly a gravel- or cobble-sized lag concentration) that formerly was draped across a topographic surface and was later buried by additional sediments. A stone line generally caps material that was subject to weathering, soil formation, and erosion before burial. Many stone lines seem to be buried erosion pavements, originally formed by sheet and rill erosion across the land surface.

**Stones.** Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.

**Stony.** Refers to a soil containing stones in numbers that interfere with or prevent tillage.

**Strath terrace.** A type of stream terrace; formed as an erosional surface cut on bedrock and thinly mantled with stream deposits (alluvium).

**Stream terrace.** One of a series of platforms in a stream valley, flanking and more or less parallel to the stream channel, originally formed near the level of the stream; represents the remnants of an abandoned flood plain, stream bed, or valley floor produced during a former state of fluvial erosion or deposition.

**Stripcropping.** Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to wind erosion and water erosion.

**Structure, soil.** The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular*. *Structureless* soils are either *single grained* (each grain by itself, as in dune sand) or *massive* (the particles adhering without any regular cleavage, as in many hardpans).

**Stubble mulch.** Stubble or other crop residue left on the soil or partly worked into the soil. It protects the soil from wind erosion and water erosion after harvest, during preparation of a seedbed for the next crop, and during the early growing period of the new crop.

**Subsoil.** Technically, the B horizon; roughly, the part of the solum below plow depth.

**Subsoiling.** Tilling a soil below normal plow depth, ordinarily to shatter a hardpan or claypan.

**Substratum.** The part of the soil below the solum.

**Subsurface layer.** Any surface soil horizon (A, E, AB, or EB) below the surface layer.

**Summit.** The topographically highest position of a hillslope. It has a nearly level (planar or only slightly convex) surface.

**Surface layer.** The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the “plow layer,” or the “Ap horizon.”

**Surface soil.** The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.

**Swale.** A slight depression in the midst of generally level land. A shallow depression in an undulating ground moraine caused by uneven glacial deposition.

**Terminal moraine.** An end moraine that marks the farthest advance of a glacier. It typically has the form of a massive arcuate or concentric ridge, or complex of ridges, and is underlain by till and other types of drift.

**Terrace (conservation).** An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.

**Terrace (geomorphology).** A steplike surface, bordering a valley floor or shoreline, that represents the former position of a flood plain, lake, or seashore. The term is usually applied both to the relatively flat summit surface (tread) that was cut or built by stream or wave action and to the steeper descending slope (scarp or riser) that has graded to a lower base level of erosion.

**Terracettes.** Small, irregular steplike forms on steep hillslopes, especially in pasture, formed by creep or erosion of surficial materials that may be induced or enhanced by trampling of livestock, such as sheep or cattle.

**Texture, soil.** The relative proportions of sand, silt, and clay particles in a mass of soil. The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay,* and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying “coarse,” “fine,” or “very fine.”

**Thin layer** (in tables). Otherwise suitable soil material that is too thin for the specified use.

**Till.** Dominantly unsorted and nonstratified drift, generally unconsolidated and deposited directly by a glacier without subsequent reworking by meltwater, and consisting of a heterogeneous mixture of clay, silt, sand, gravel, stones, and boulders; rock fragments of various lithologies are embedded within a finer matrix that can range from clay to sandy loam.

**Till plain.** An extensive area of level to gently undulating soils underlain predominantly by till and bounded at the distal end by subordinate recessional or end moraines.

**Tilth, soil.** The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

**Toeslope.** The gently inclined surface at the base of a hillslope. Toeslopes in profile are commonly gentle and linear and are constructional surfaces forming the lower part of a hillslope continuum that grades to valley or closed-depression floors.

**Topsoil.** The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.

**Trace elements.** Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.

**Tread.** The flat to gently sloping, topmost, laterally extensive slope of terraces, flood-plain steps, or other stepped landforms; commonly a recurring part of a series of natural steplike landforms, such as successive stream terraces.

**Upland.** An informal, general term for the higher ground of a region, in contrast with a low-lying adjacent area, such as a valley or plain, or for land at a higher elevation

than the flood plain or low stream terrace; land above the footslope zone of the hillslope continuum.

**Valley fill.** The unconsolidated sediment deposited by any agent (water, wind, ice, or mass wasting) so as to fill or partly fill a valley.

**Variation.** Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.

**Varve.** A sedimentary layer or a lamina or sequence of laminae deposited in a body of still water within a year. Specifically, a thin pair of graded glaciolacustrine layers seasonally deposited, usually by meltwater streams, in a glacial lake or other body of still water in front of a glacier.

**Very stony spot (map symbol).** An area in which 0.1 to 3.0 percent of the surface is covered by rock fragments more than 10 inches in diameter within an area that does not have rock fragments on the surface. Typically less than 4 acres.

**Water bars.** Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.

**Weathering.** All physical disintegration, chemical decomposition, and biologically induced changes in rocks or other deposits at or near the earth's surface by atmospheric or biologic agents or by circulating surface waters but involving essentially no transport of the altered material.

**Well graded.** Refers to soil material consisting of coarse grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.

**Wet spot (map symbol).** An area of somewhat poorly drained to very poorly drained soil at least two drainage classes wetter than the named soils in the surrounding map unit. Each symbol represents one wet area or several grouped wet areas totaling less than 4 acres.

**Wilting point (or permanent wilting point).** The moisture content of soil, on an oven-dry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.

**Windthrow.** The uprooting and tipping over of trees by the wind.

# **Where To Get Updated Information**

The soil properties and interpretations included in this survey were current as of October 2004. More current information may be available from the Natural Resources Conservation Service (NRCS) Field Office Technical Guide at Spooner, Wisconsin, or online at [www.nrcs.usda.gov/technical/efotg](http://www.nrcs.usda.gov/technical/efotg). The data in the Field Office Technical Guide are updated periodically.

More current information may also be available through the NRCS Soil Data Mart Website at <http://soildatamart.nrcs.usda.gov>.

Additional information about soils and about NRCS is available through the Wisconsin NRCS Web page at [www.wi.nrcs.usda.gov](http://www.wi.nrcs.usda.gov).

For further information, please contact:

USDA, Natural Resources Conservation Service  
Spooner Service Center  
800 North Front Street  
Spooner, WI 54801-1350  
Phone: 715-635-8228